

Fig. 1

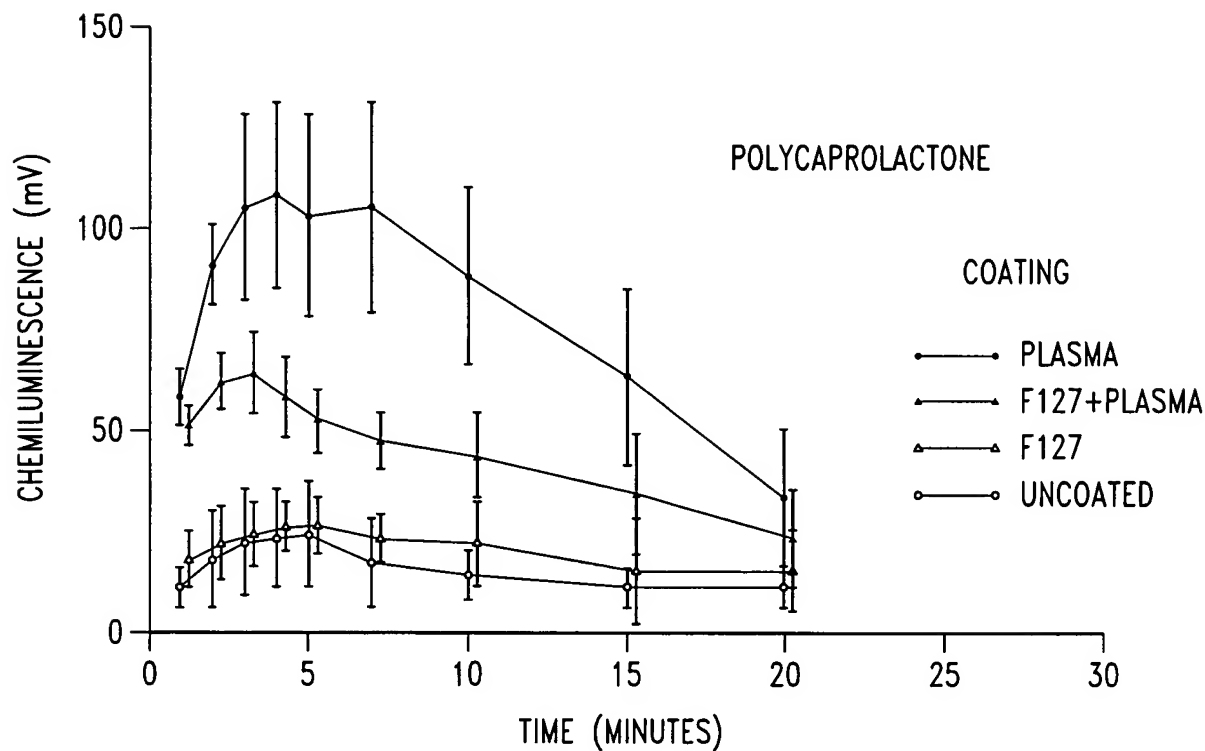


Fig. 2

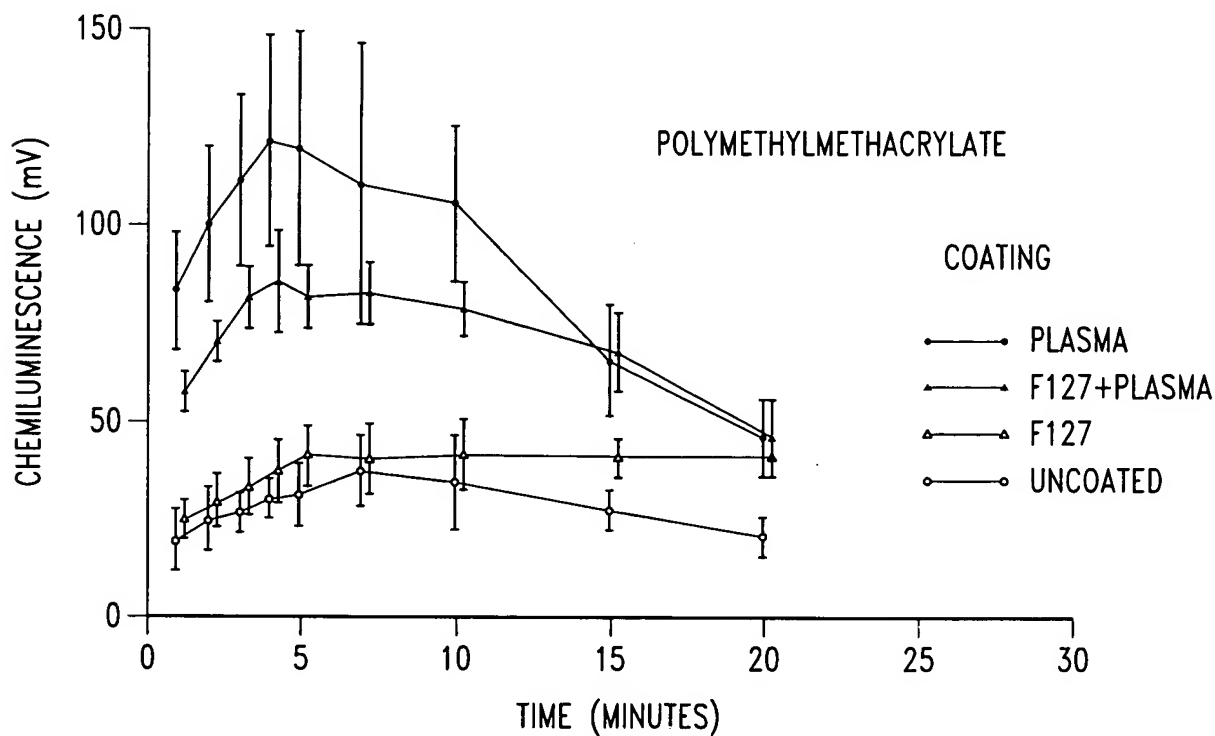


Fig. 3

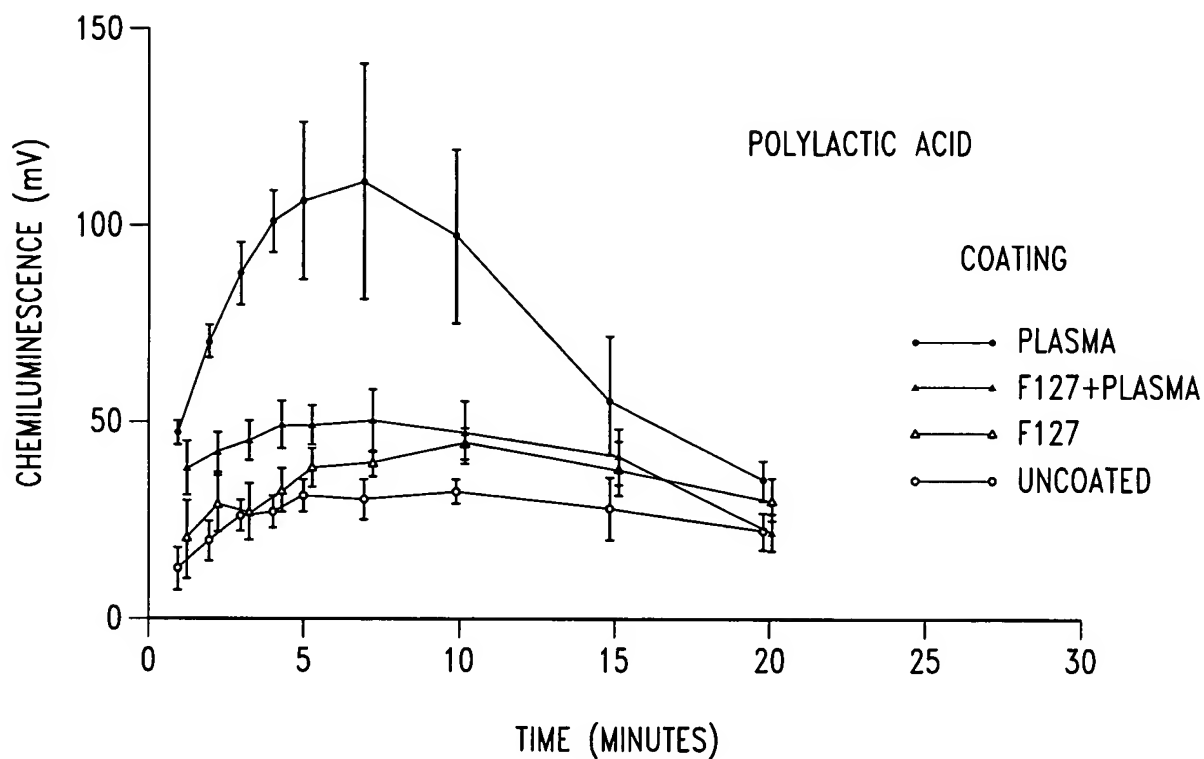


Fig. 4

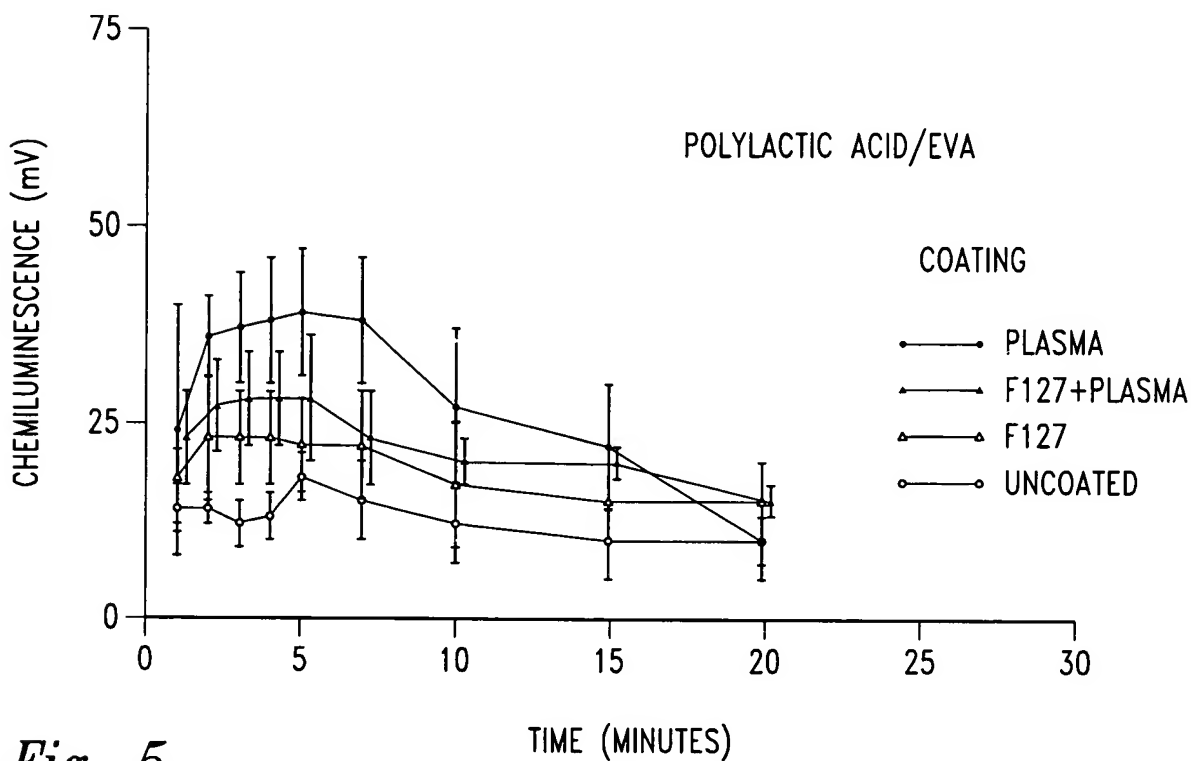


Fig. 5

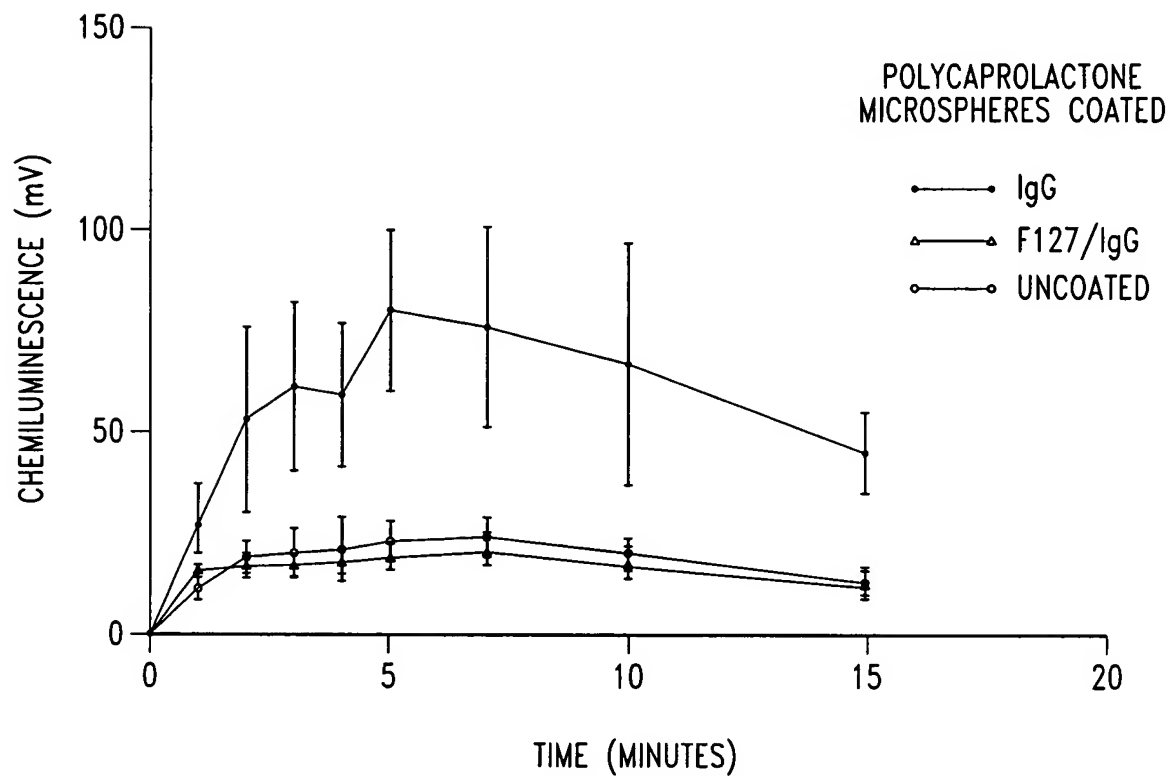


Fig. 6

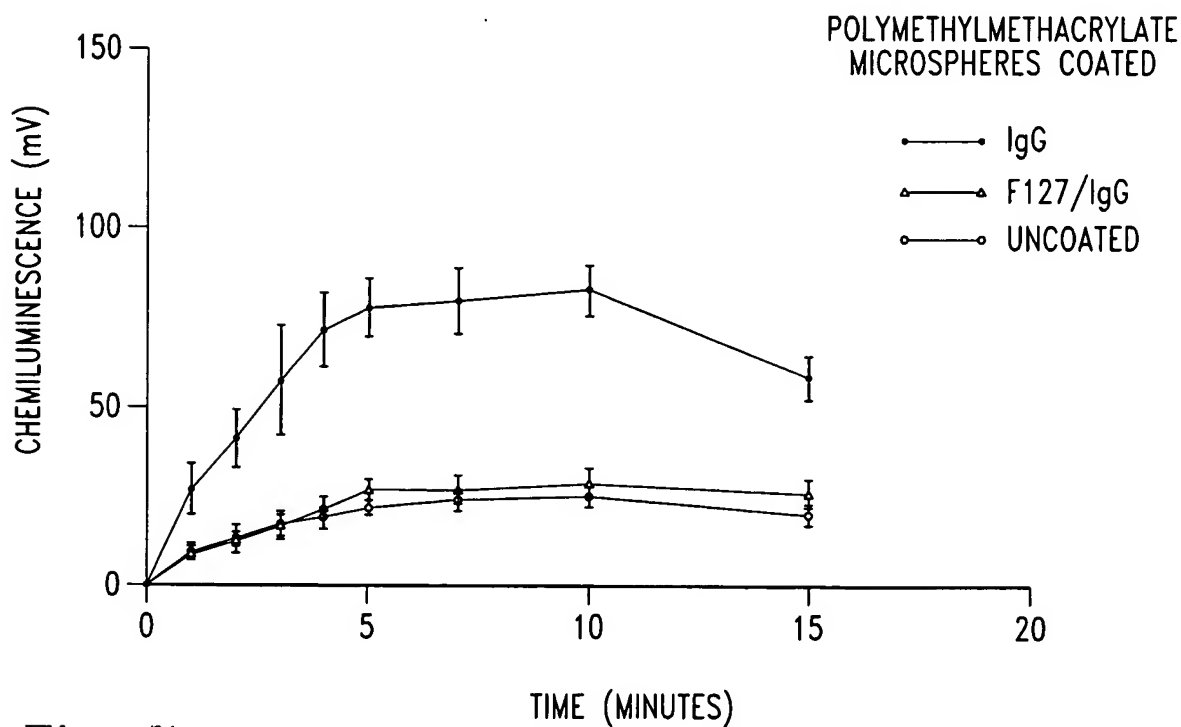


Fig. 7

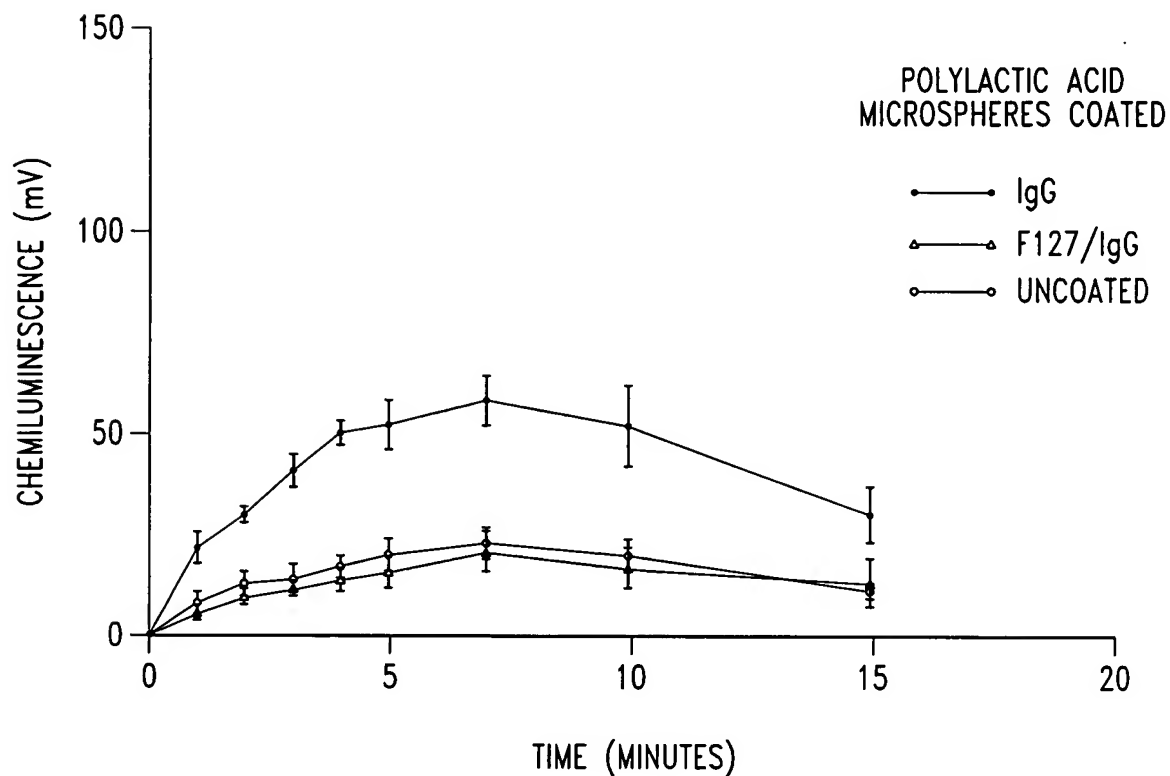


Fig. 8

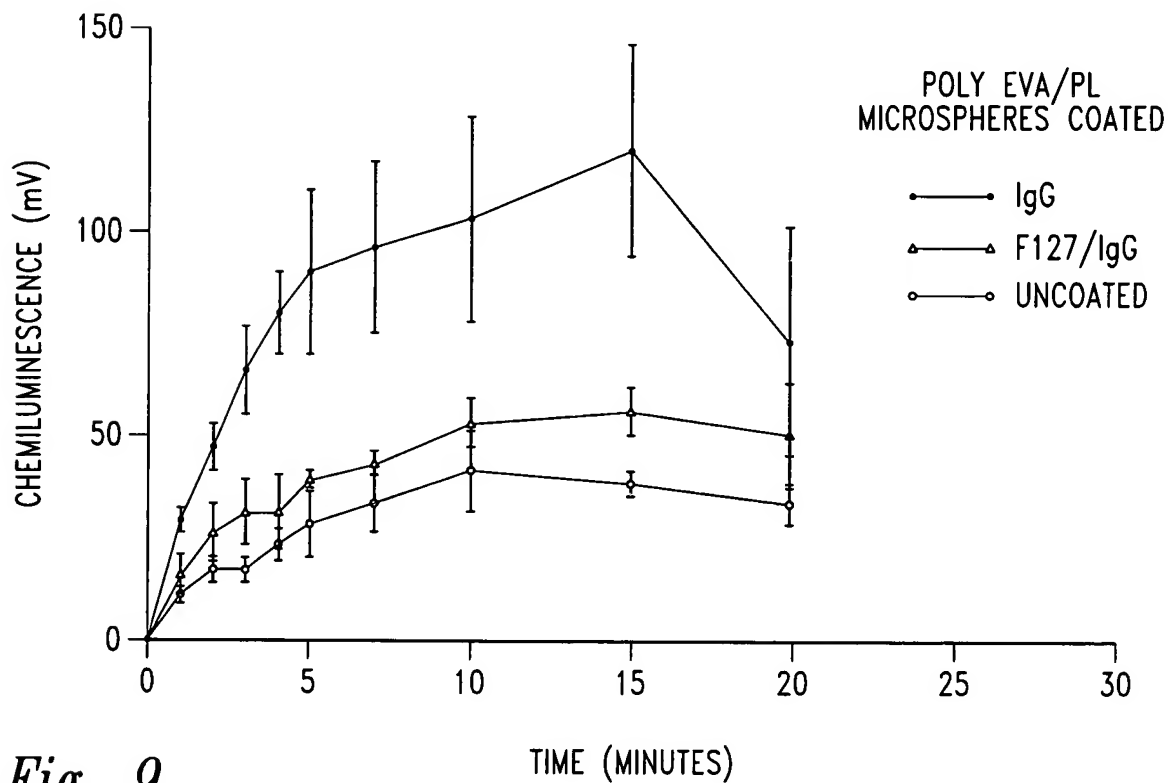


Fig. 9

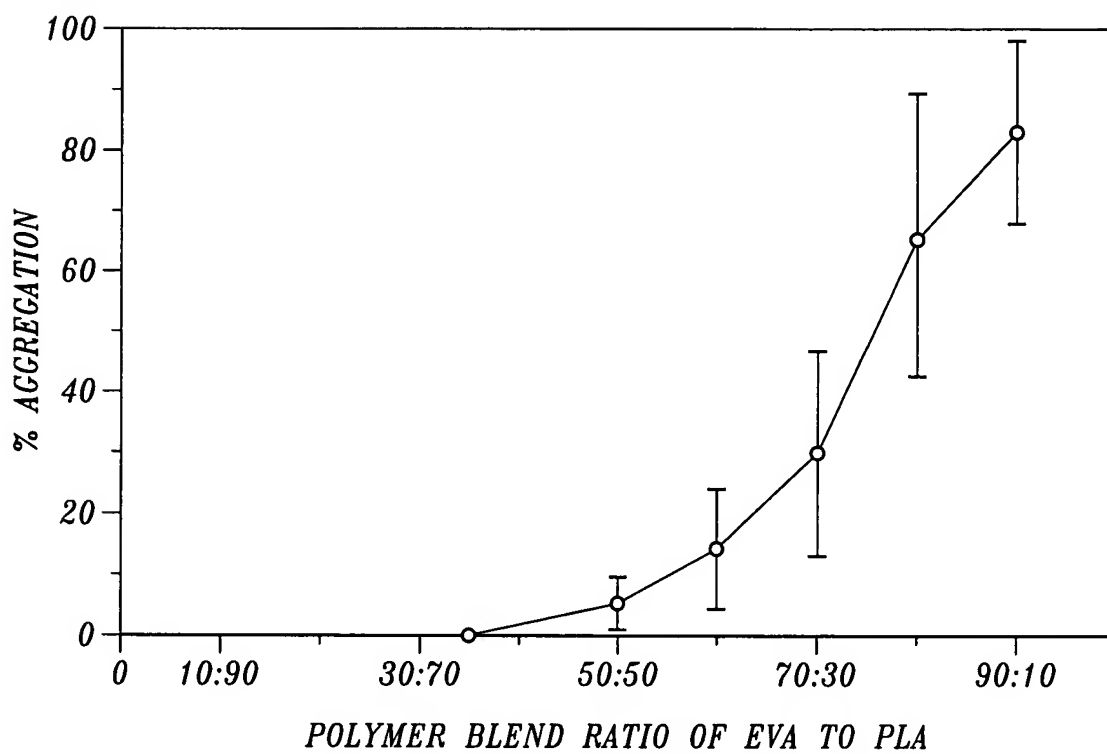


Fig. 10A

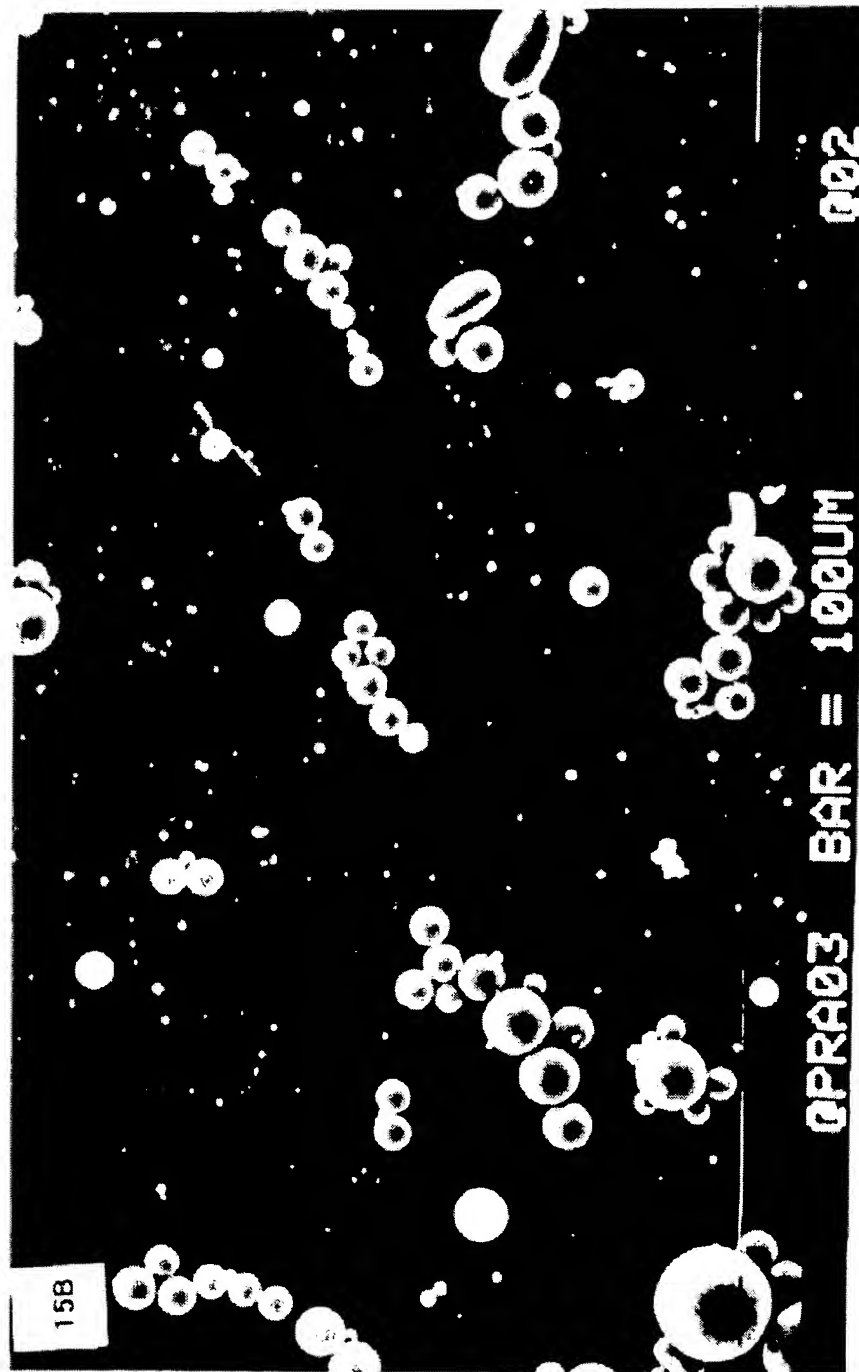


Fig. 10B

Title: COMPOSITIONS AND METHODS FOR TREATING OR PREVENTING DISEASES OF BODY PASSAGEWAYS

Inventor(s): William L. Hunter and Lindsay S. Machan

Express Mail No. EV348170571US

Docket No. 110129.405C3

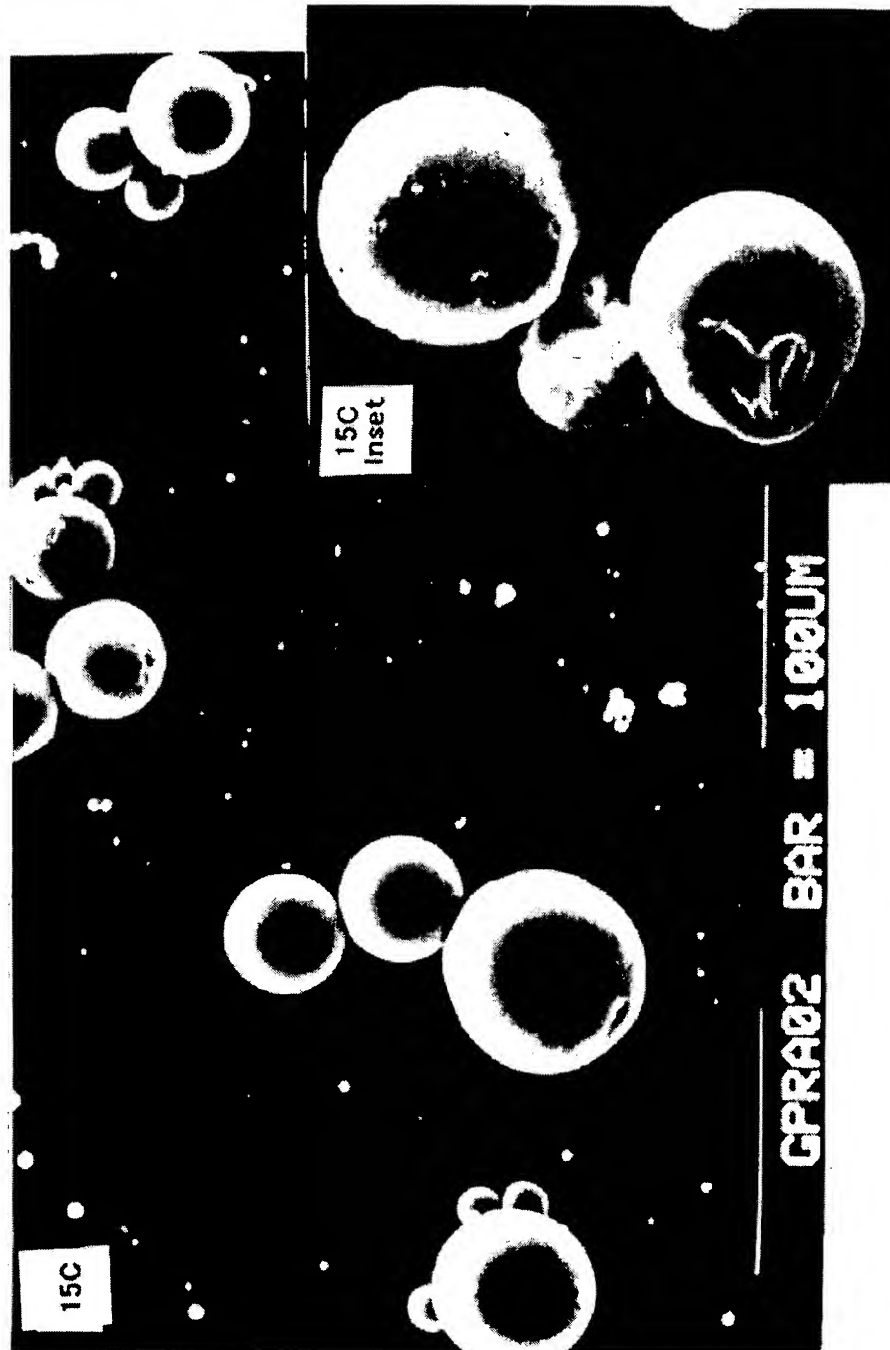


Fig. 10C

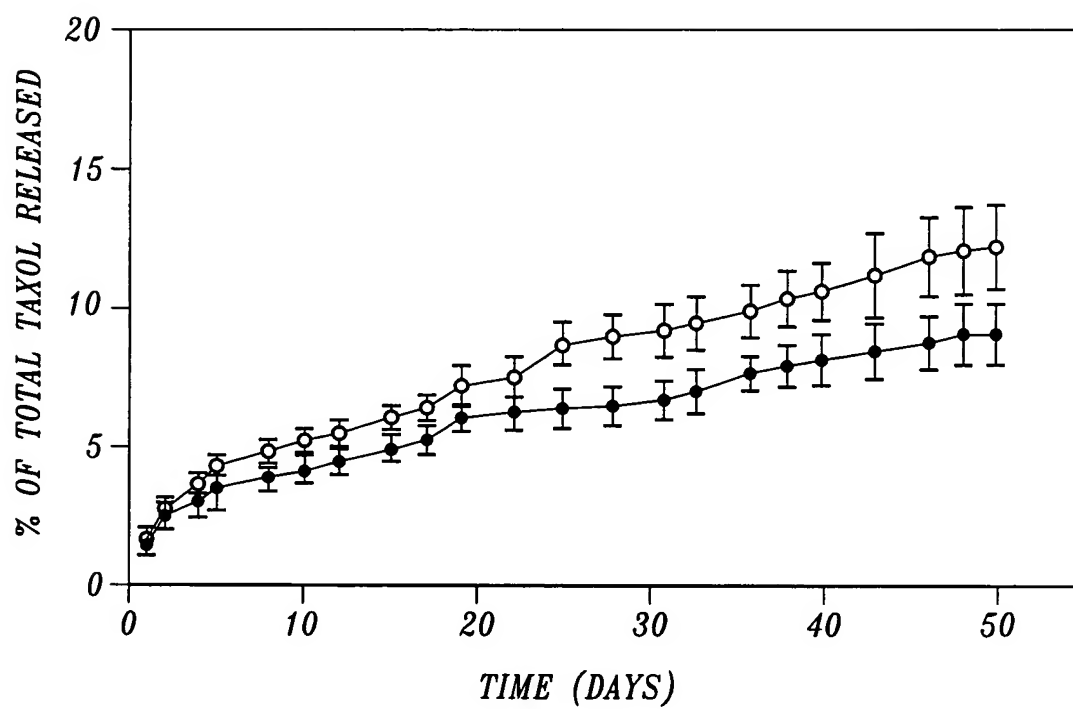


Fig. 10D

Title: COMPOSITIONS AND METHODS FOR TREATING OR PREVENTING DISEASES OF BODY PASSAGEWAYS

Inventor(s): William L. Hunter and Lindsay S. Machan

Express Mail No. EV348170571US

Docket No. 110129.405C3

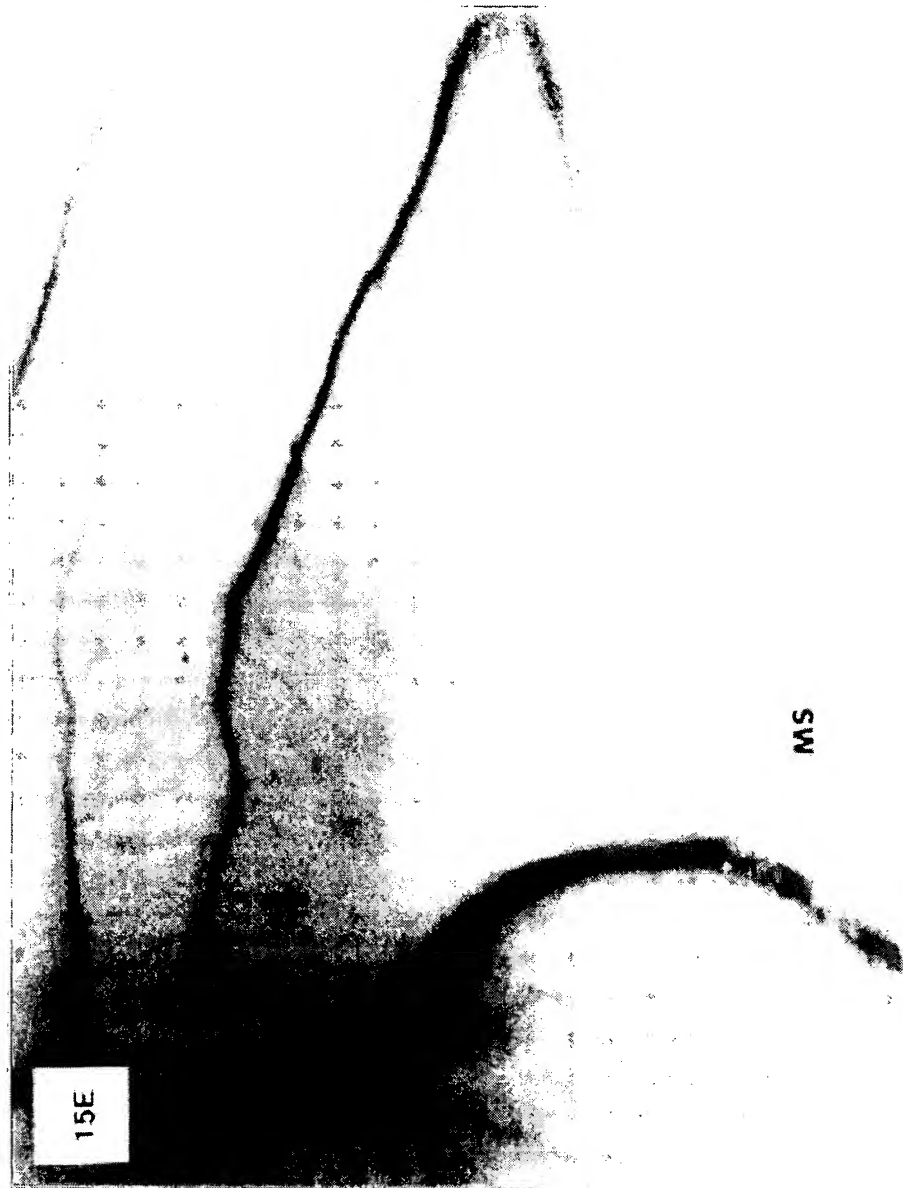


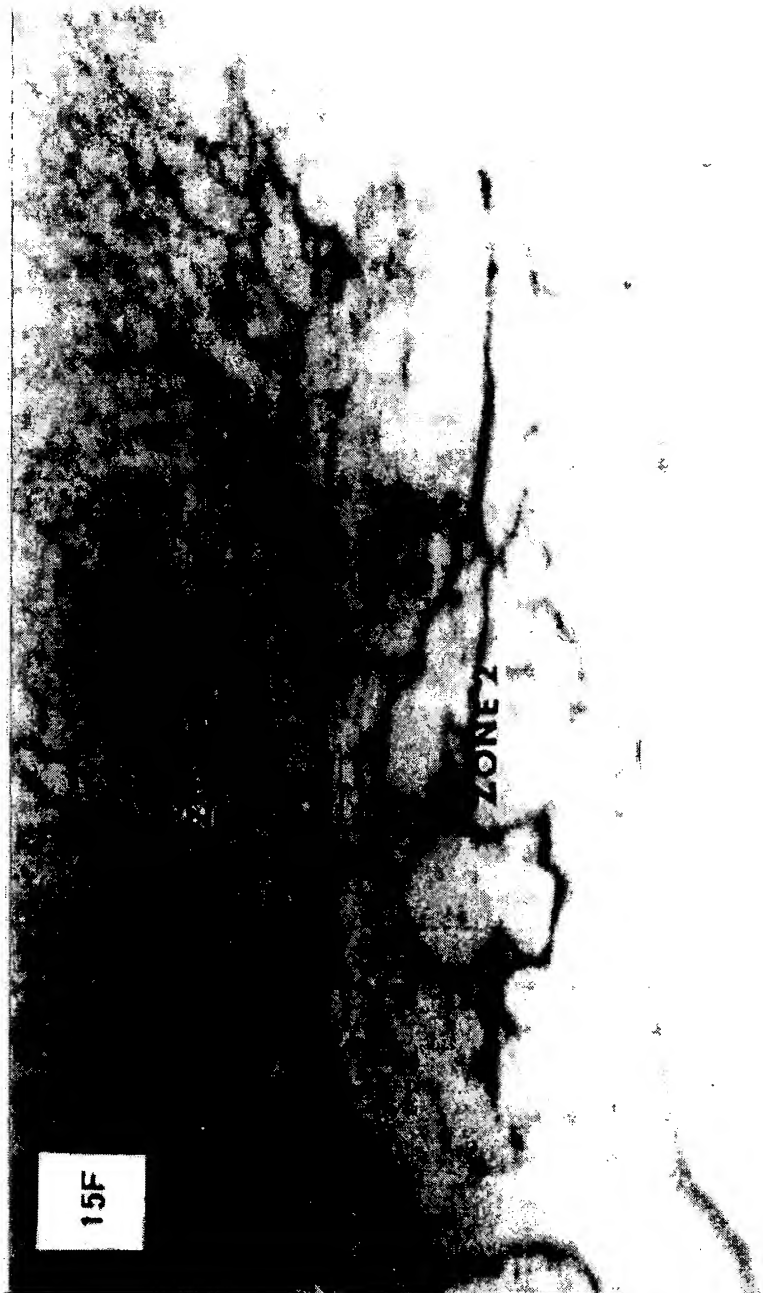
Fig. 10E

Title: COMPOSITIONS AND METHODS FOR TREATING OR PREVENTING DISEASES OF BODY PASSAGEWAYS

Inventor(s): William L. Hunter and Lindsay S. Machan

Express Mail No. EV348170571US

Docket No. 110129.405C3



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Fig. 10F

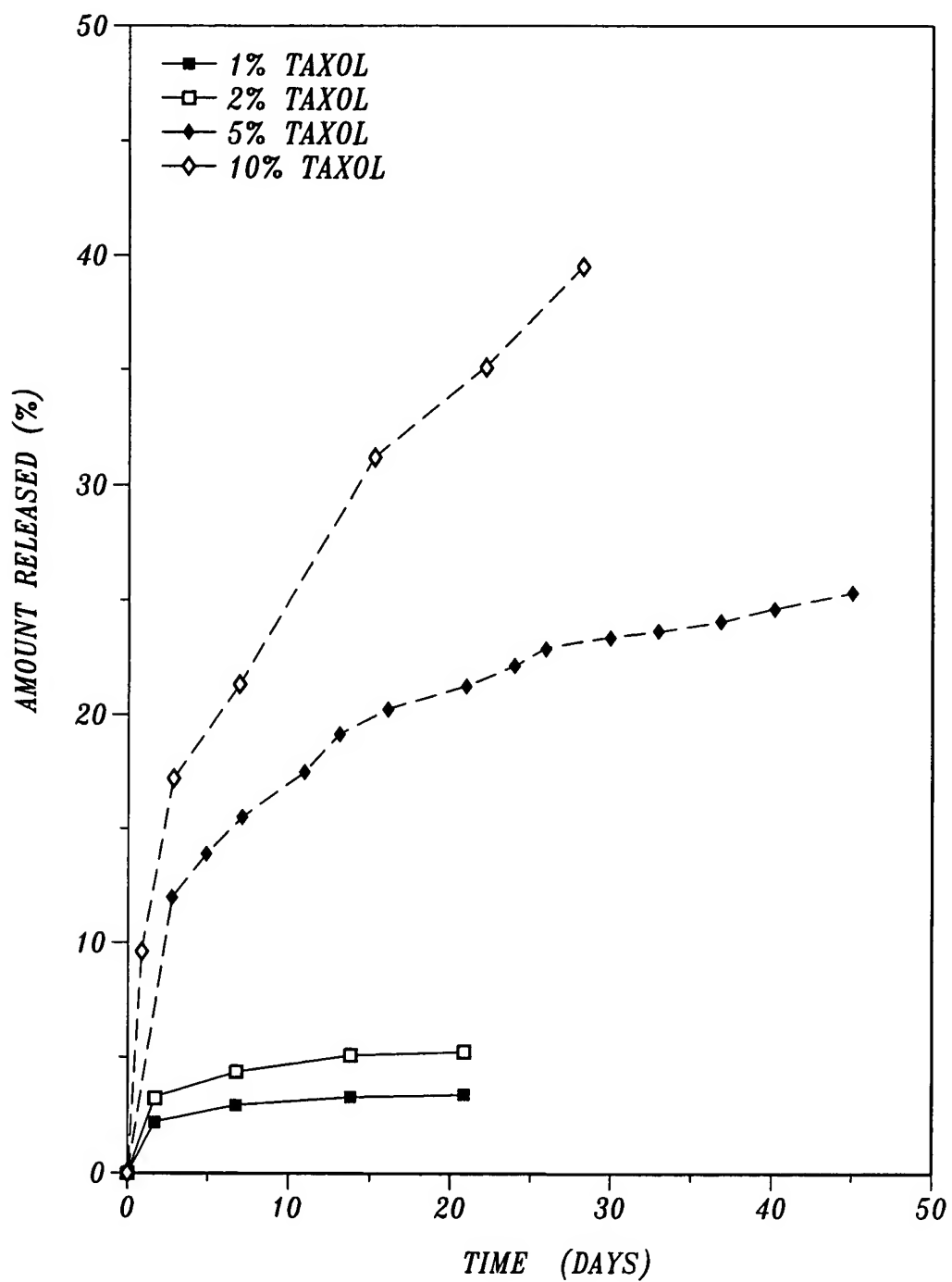


Fig. 11A

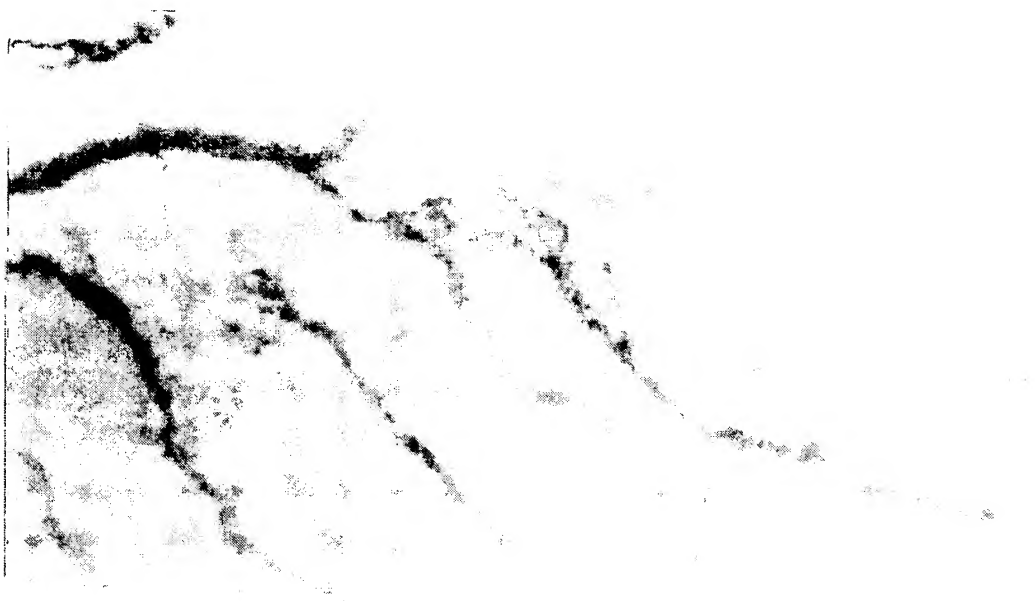


Fig. 11B



Fig. 11C

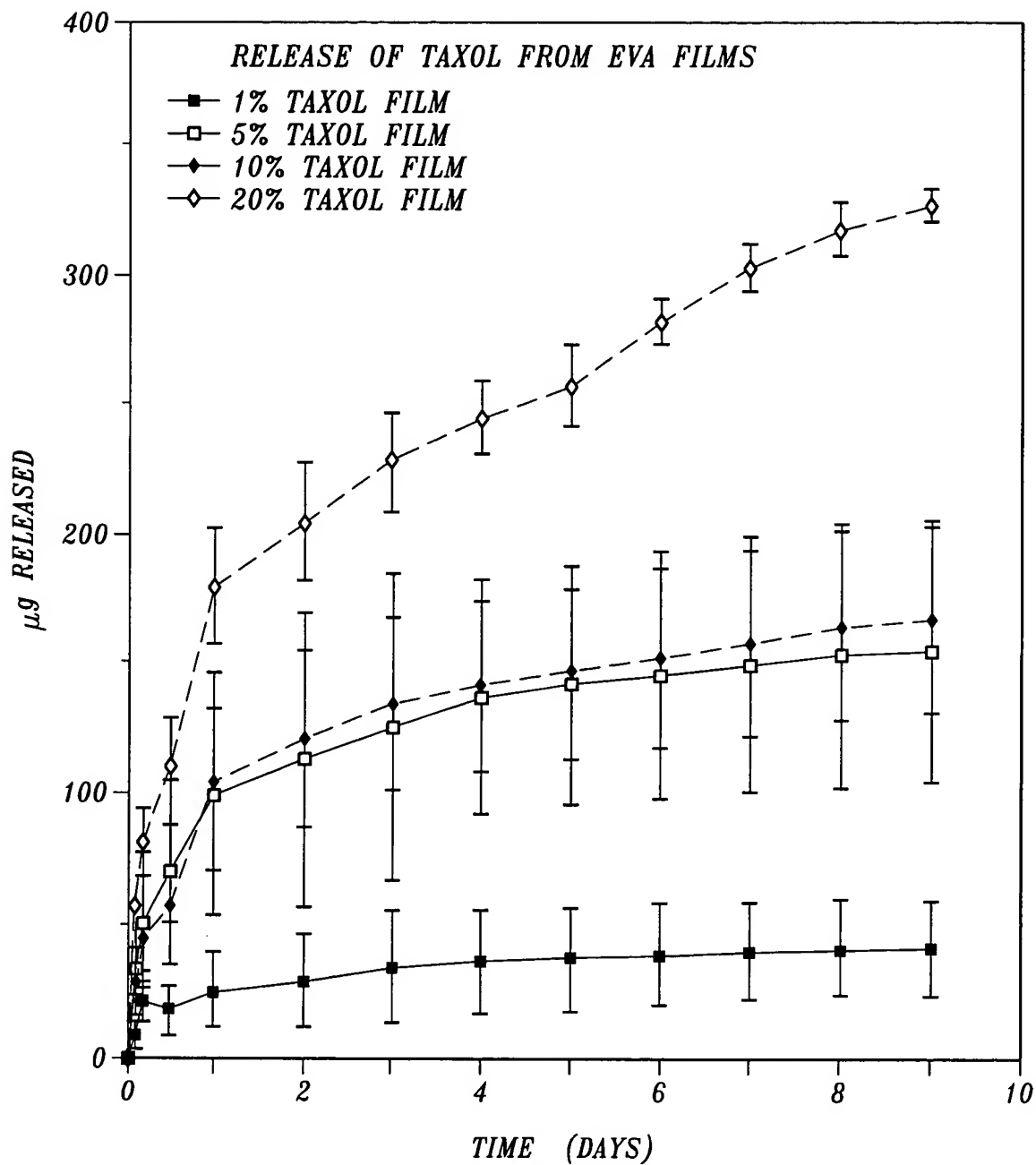


Fig. 12A

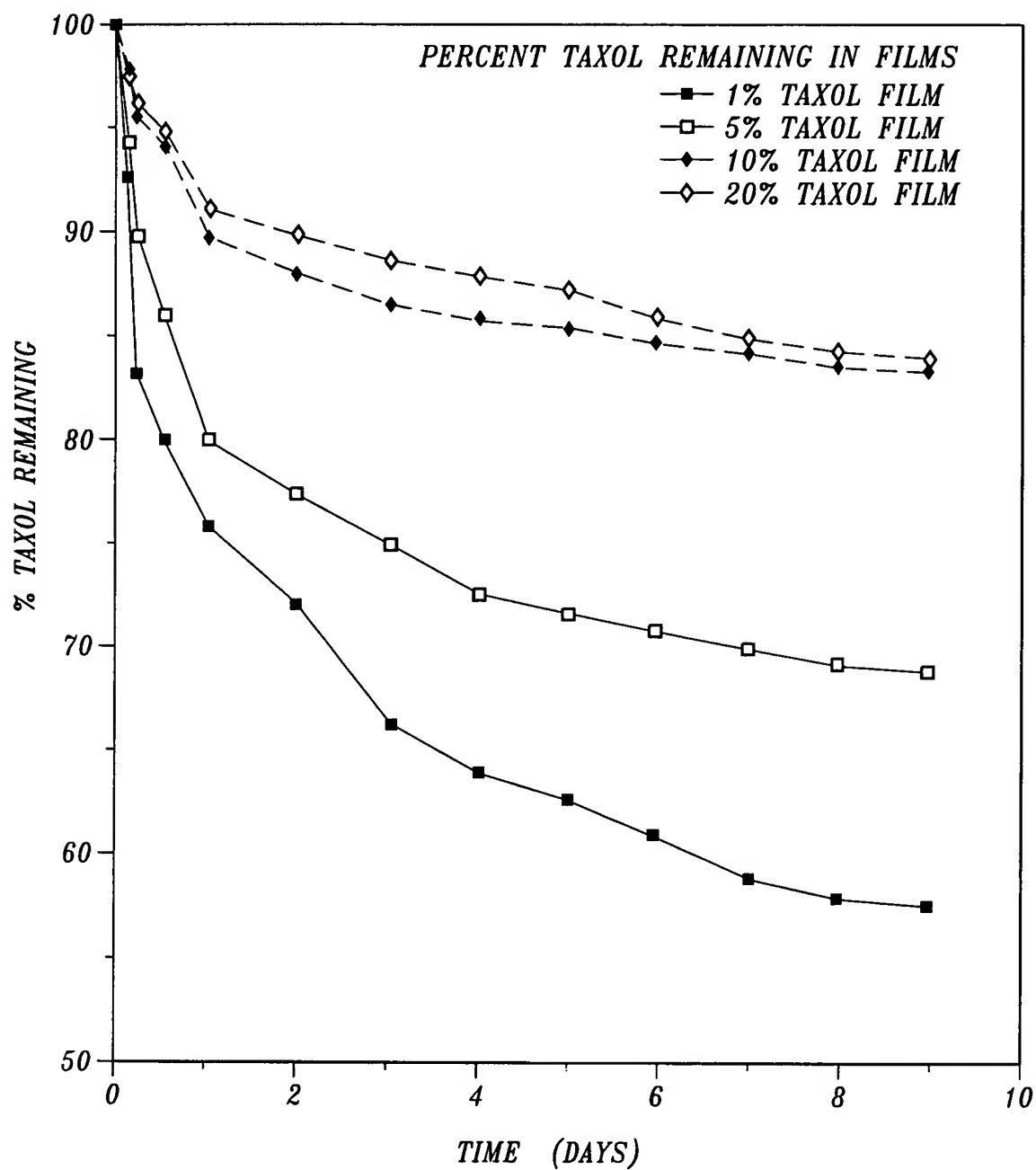


Fig. 12B

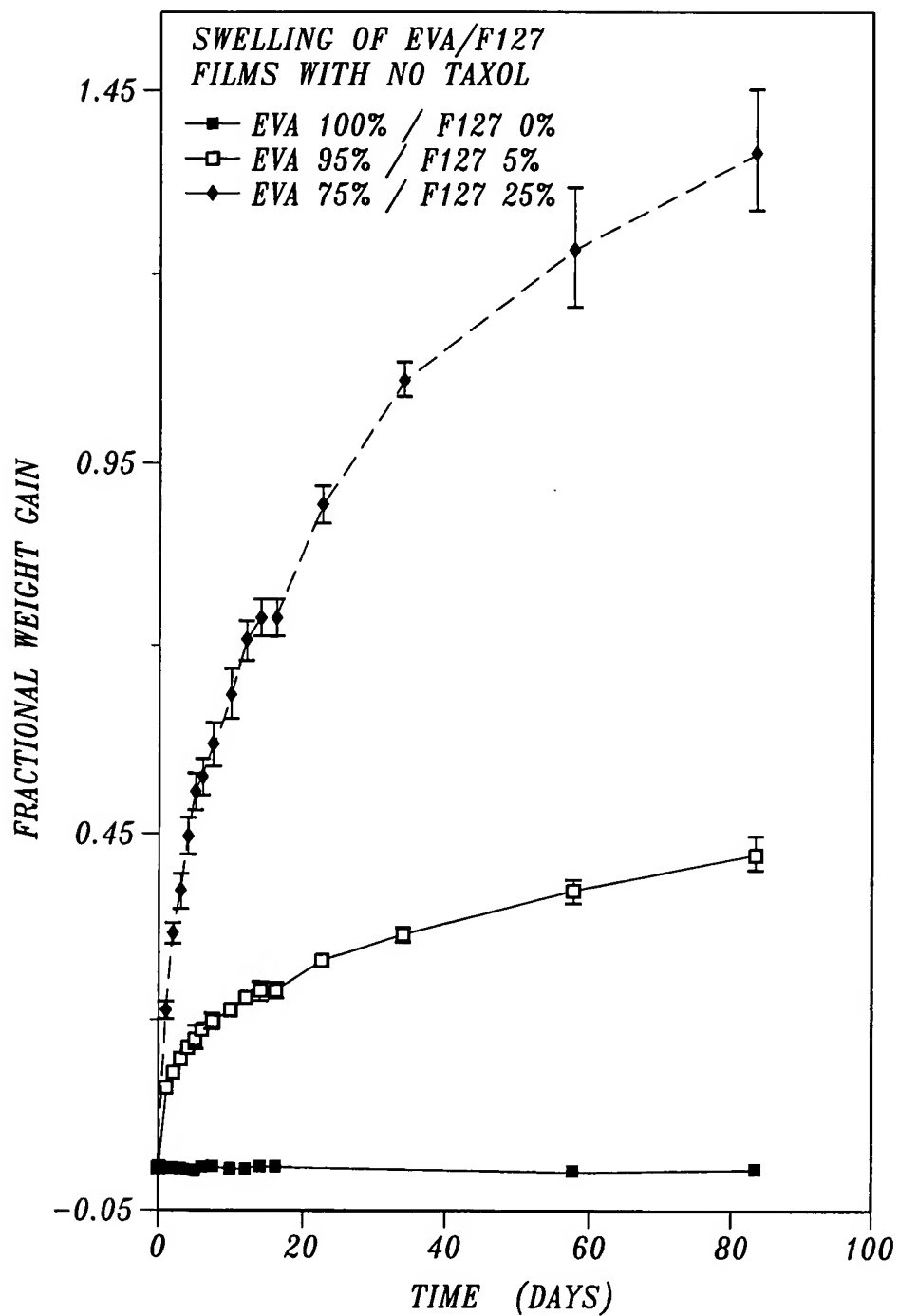


Fig. 12C

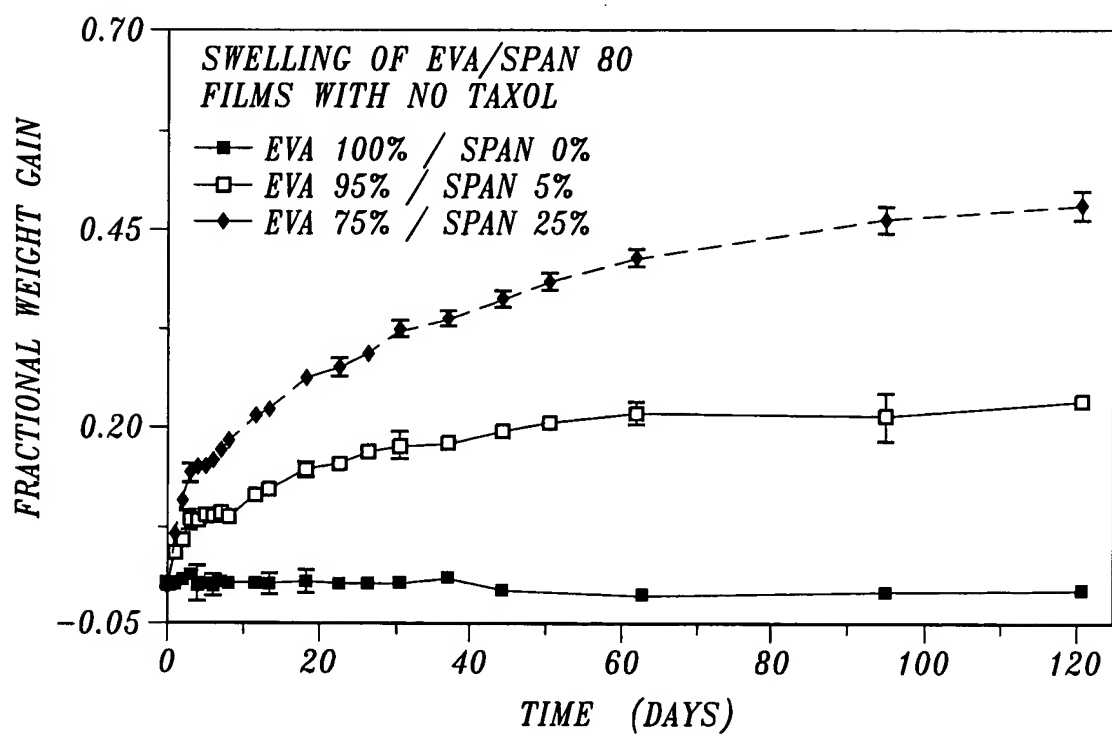


Fig. 12D

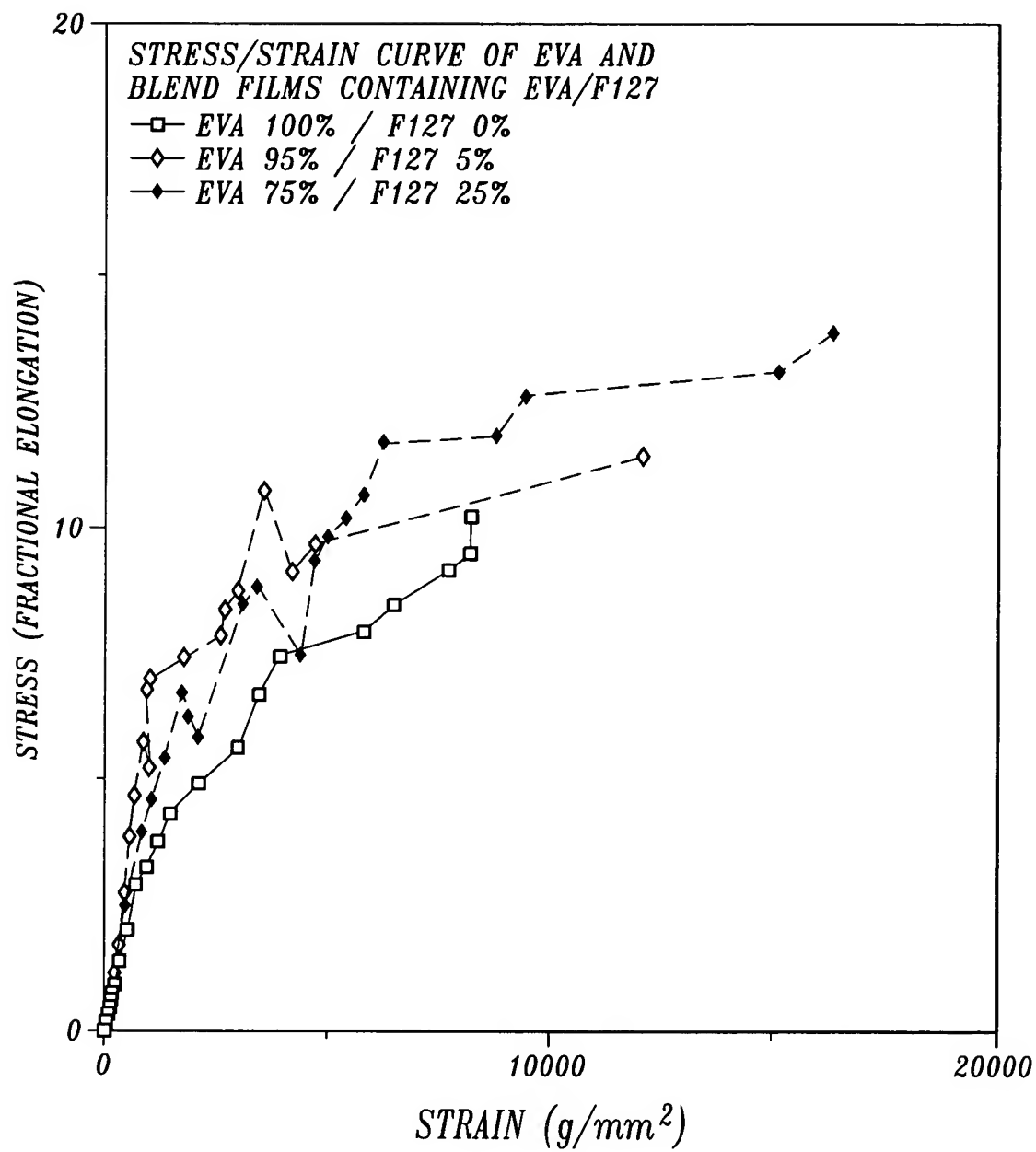


Fig. 12E

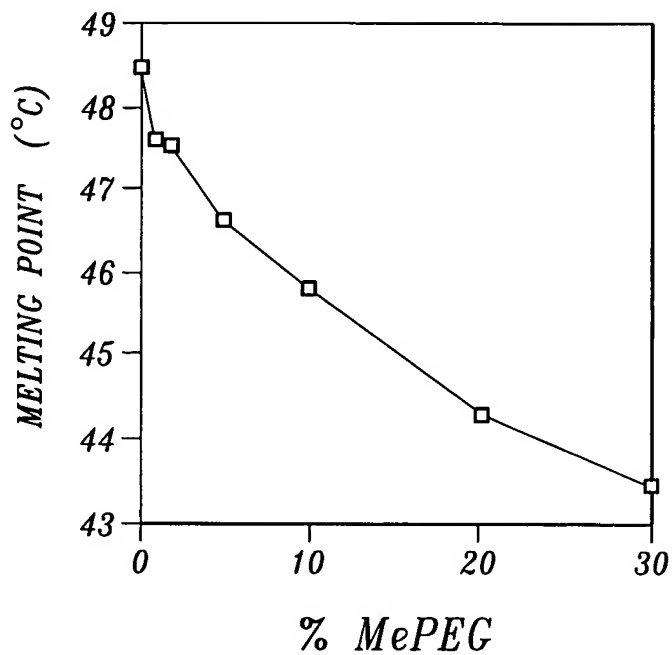


Fig. 13A

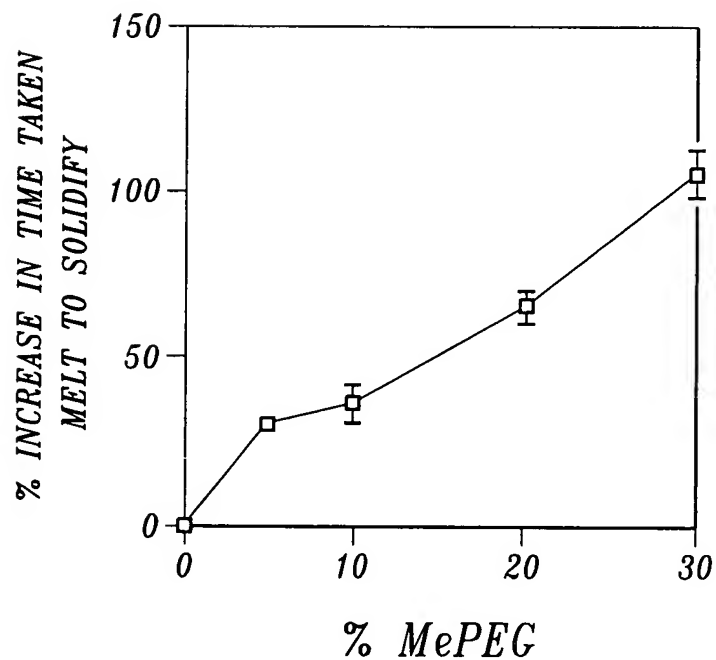


Fig. 13B

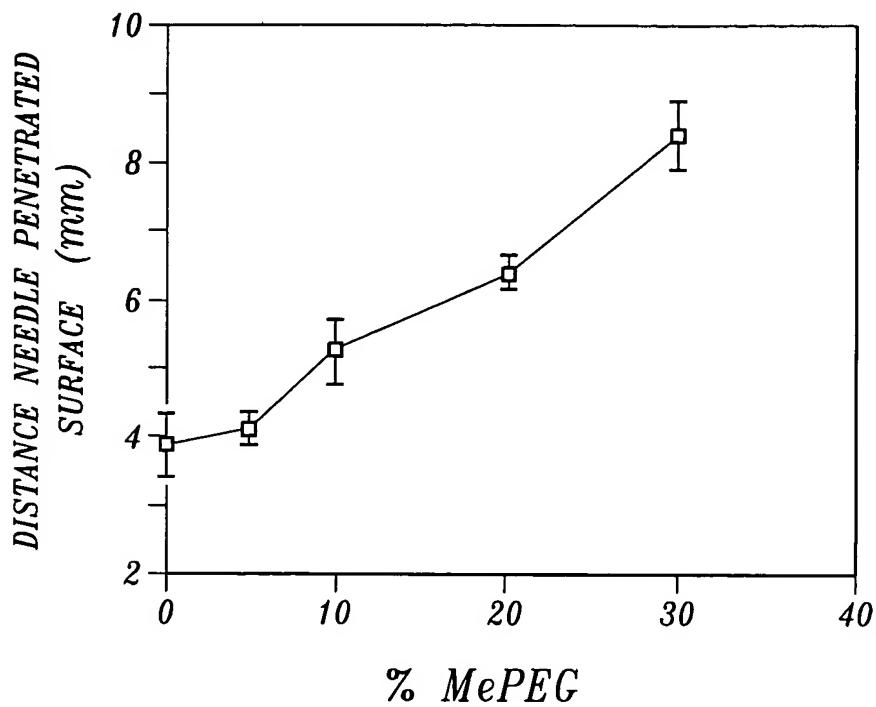


Fig. 13C

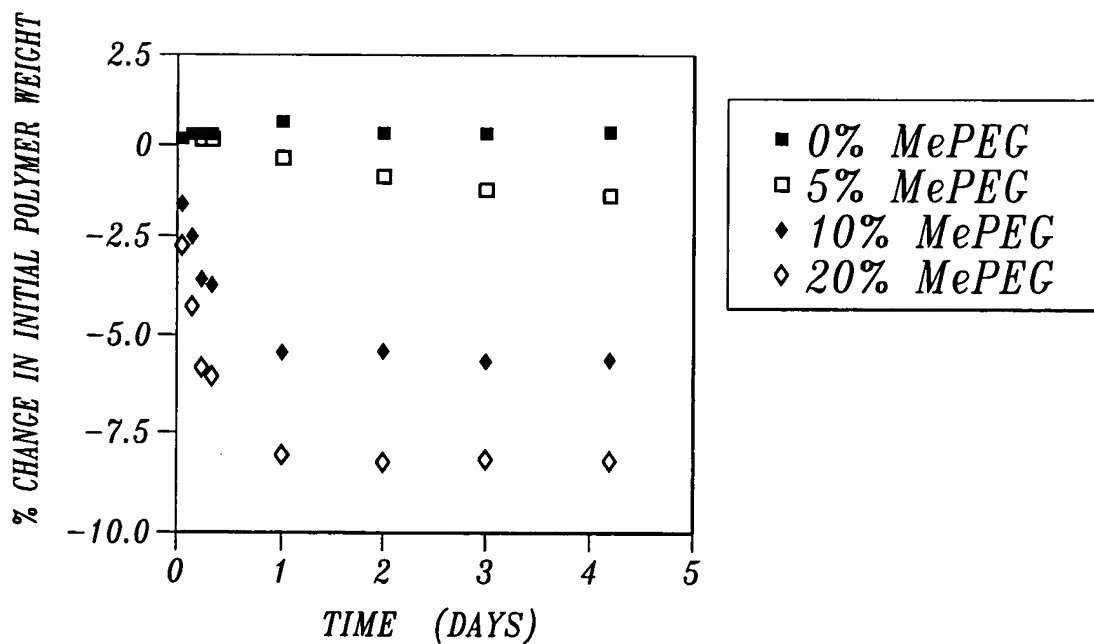


Fig. 13D

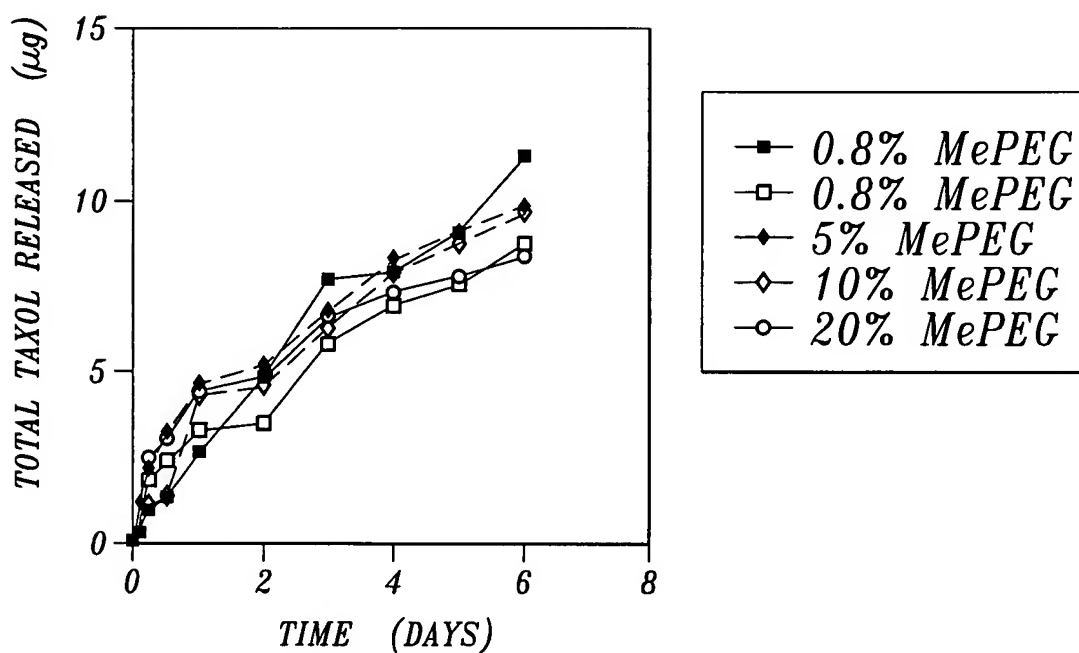


Fig. 13E

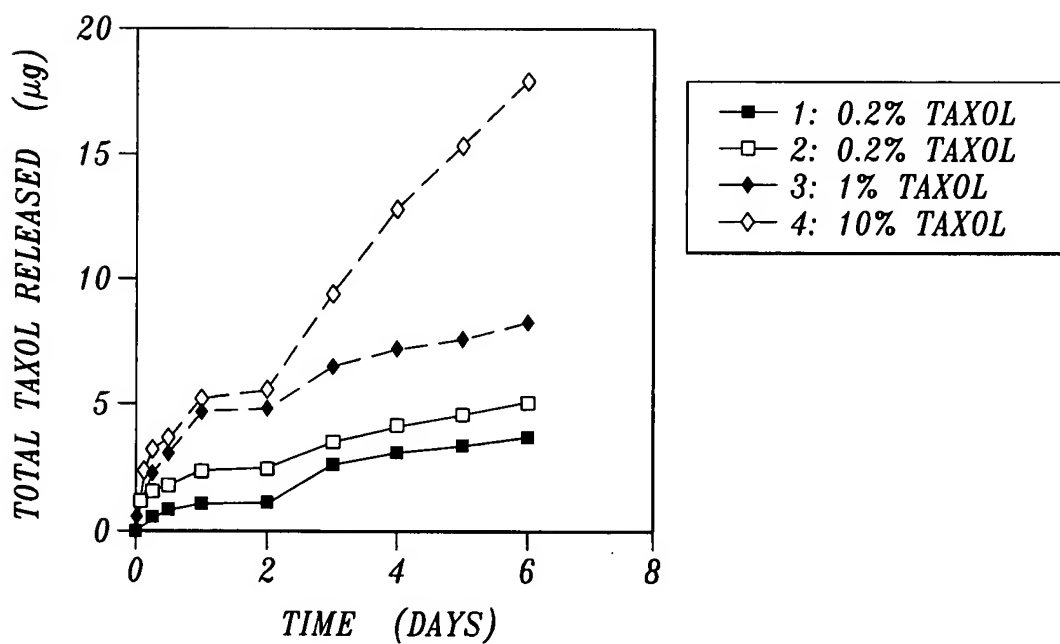


Fig. 13F

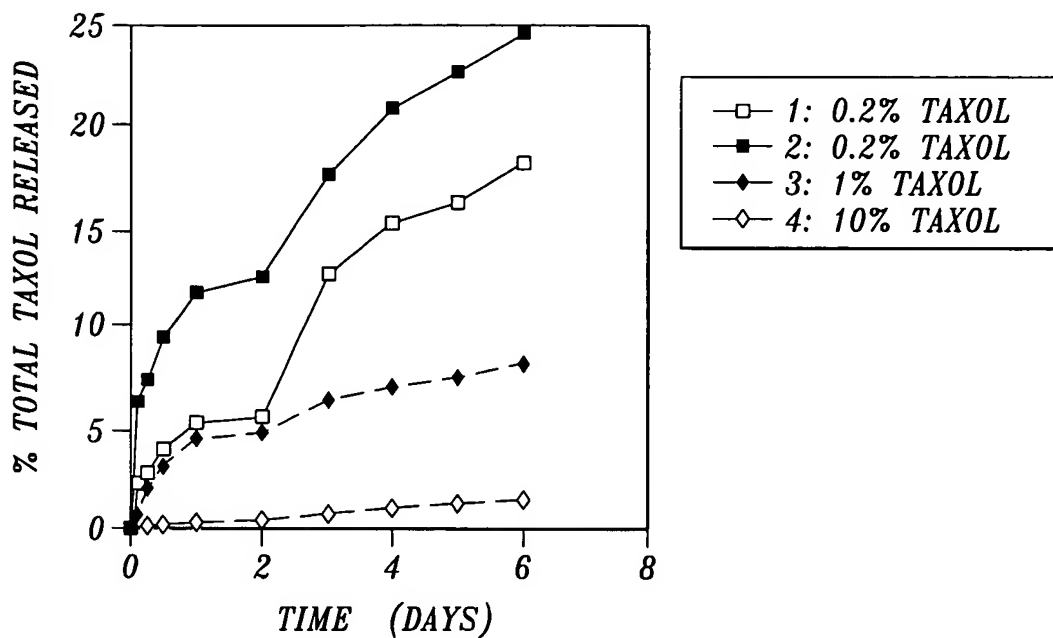


Fig. 13G

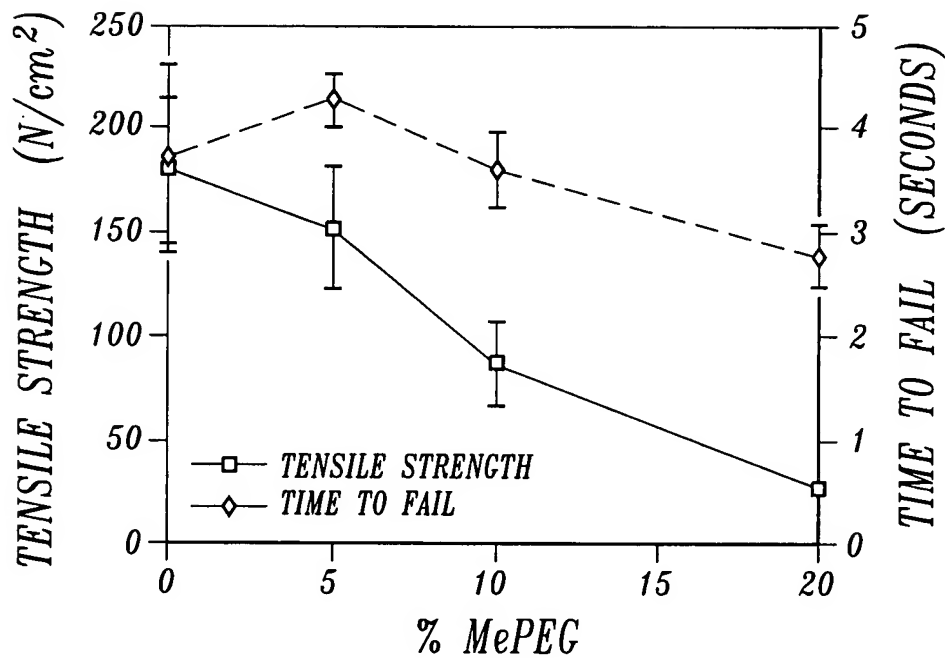


Fig. 13H

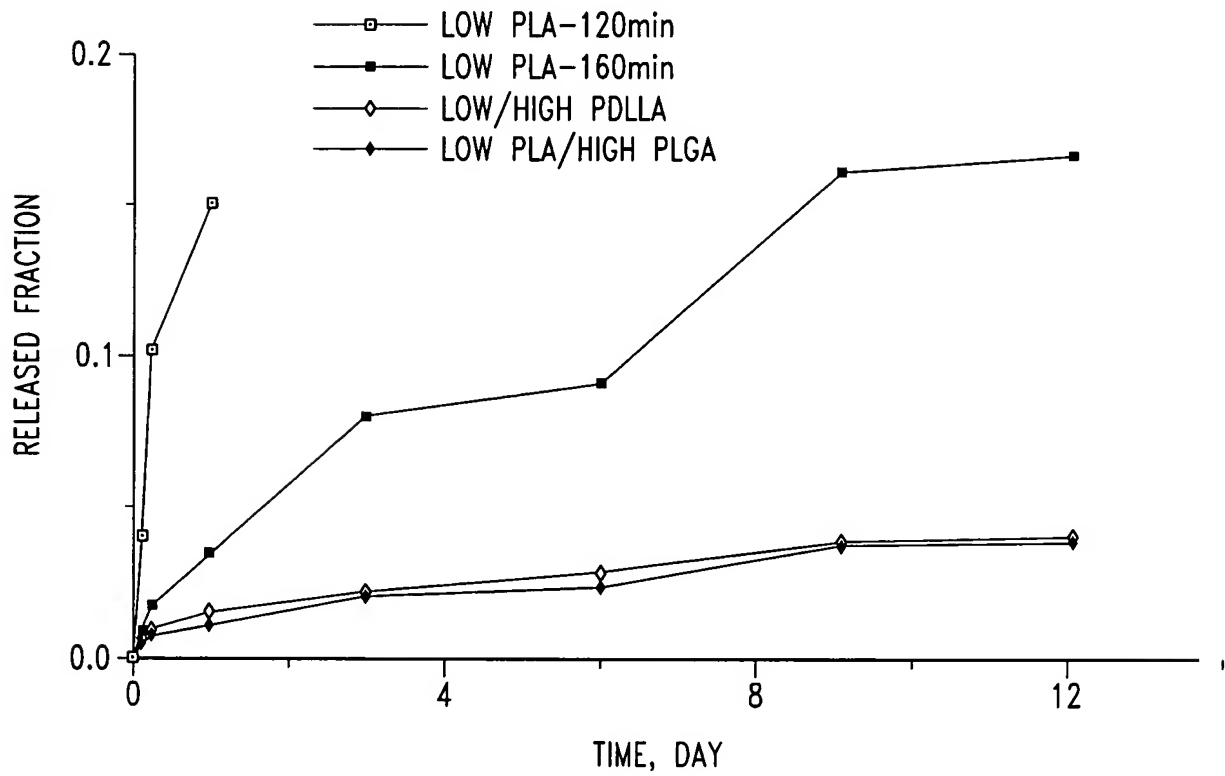


Fig. 14

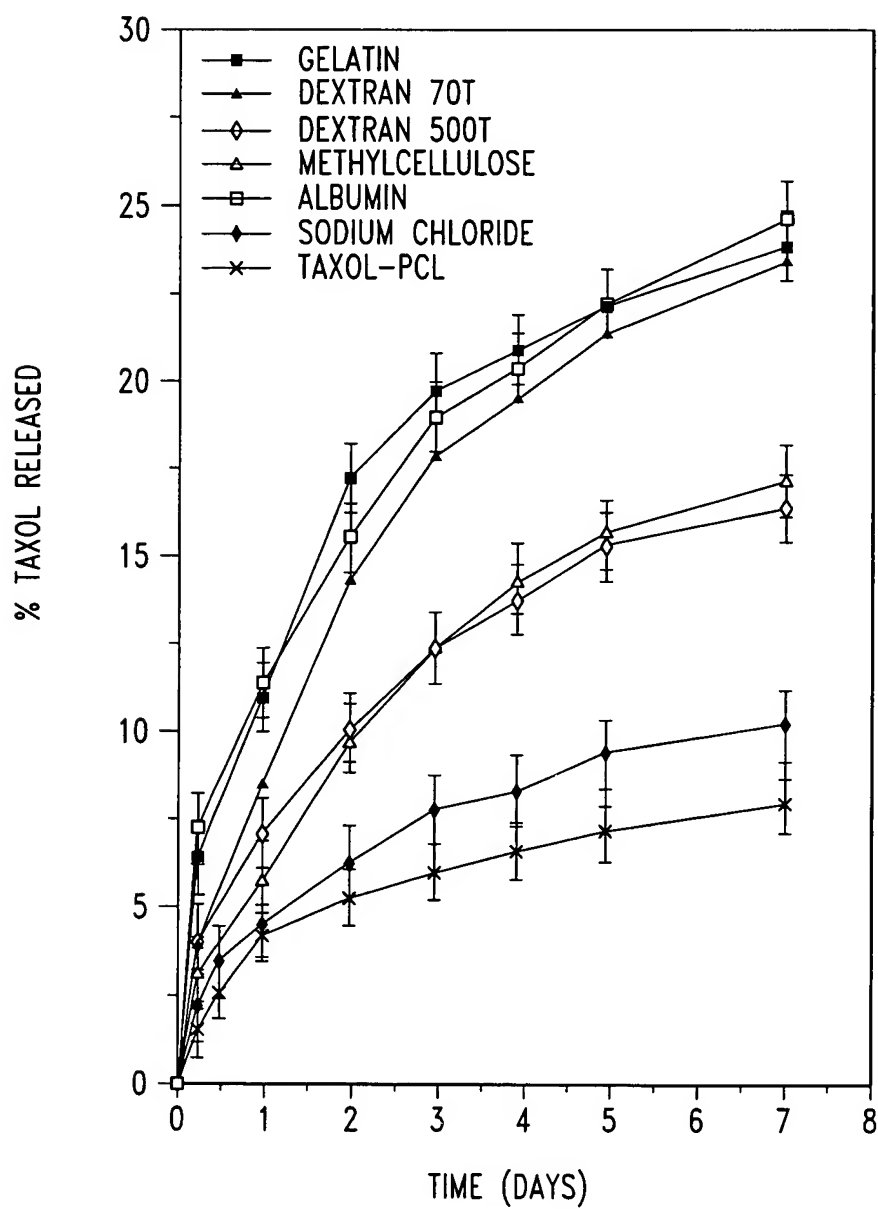


Fig. 15

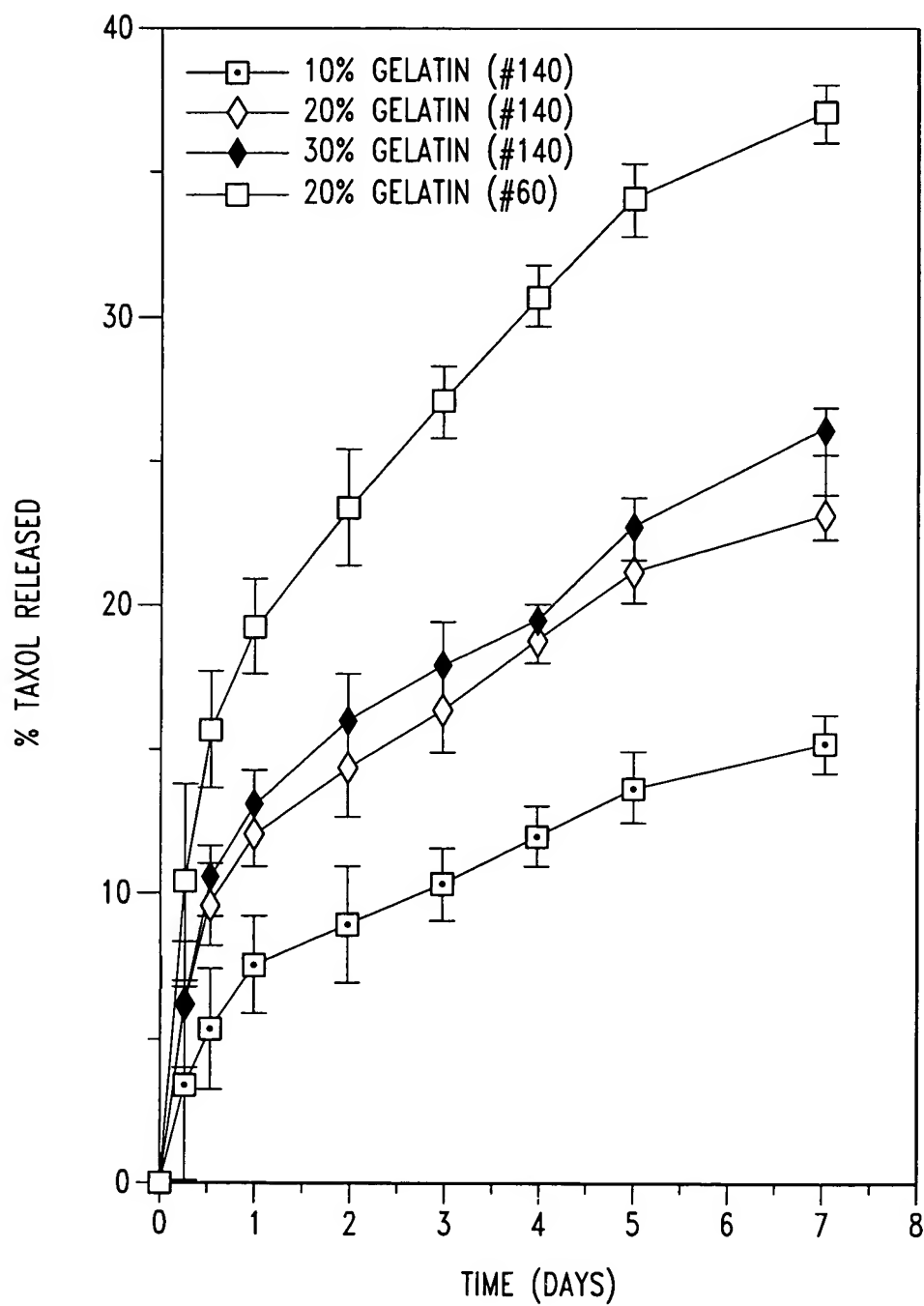


Fig. 16

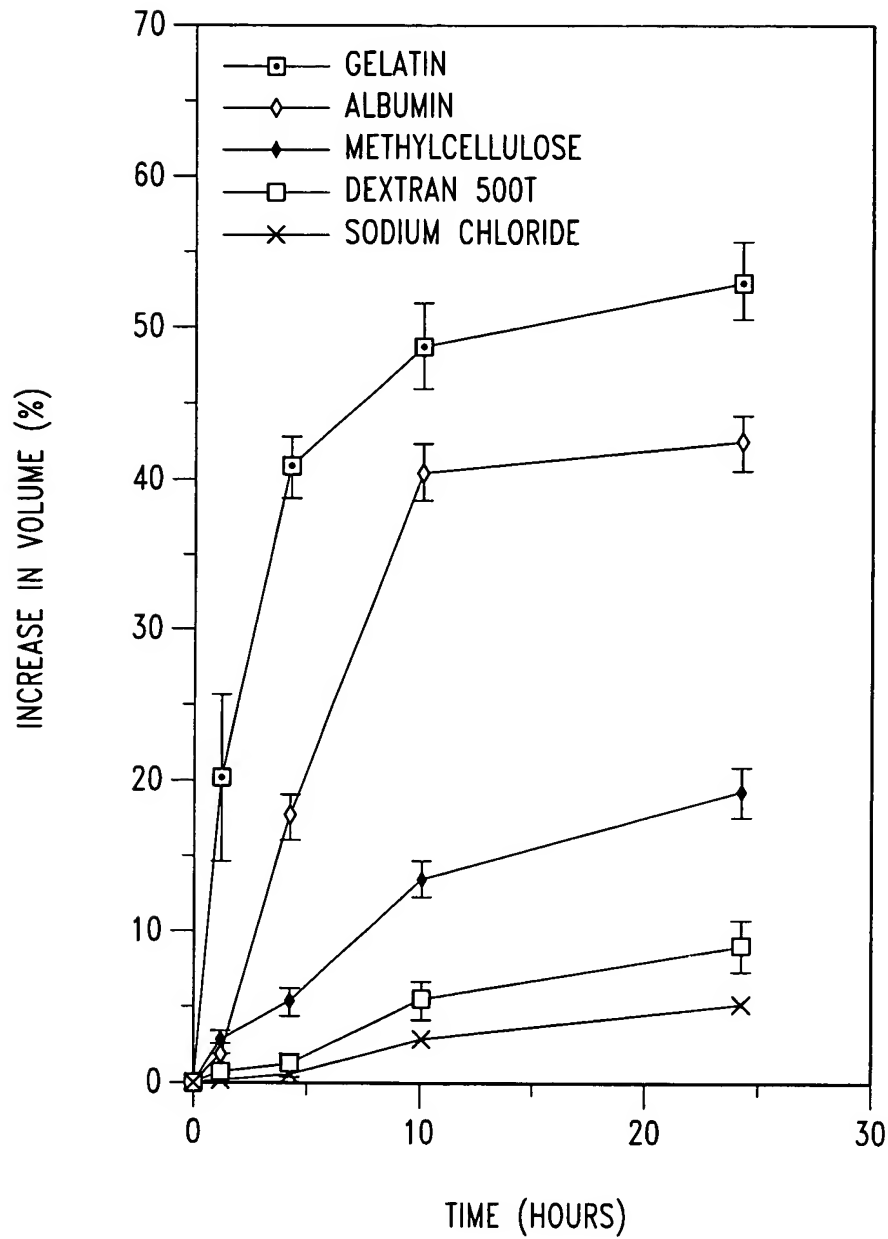


Fig. 17A

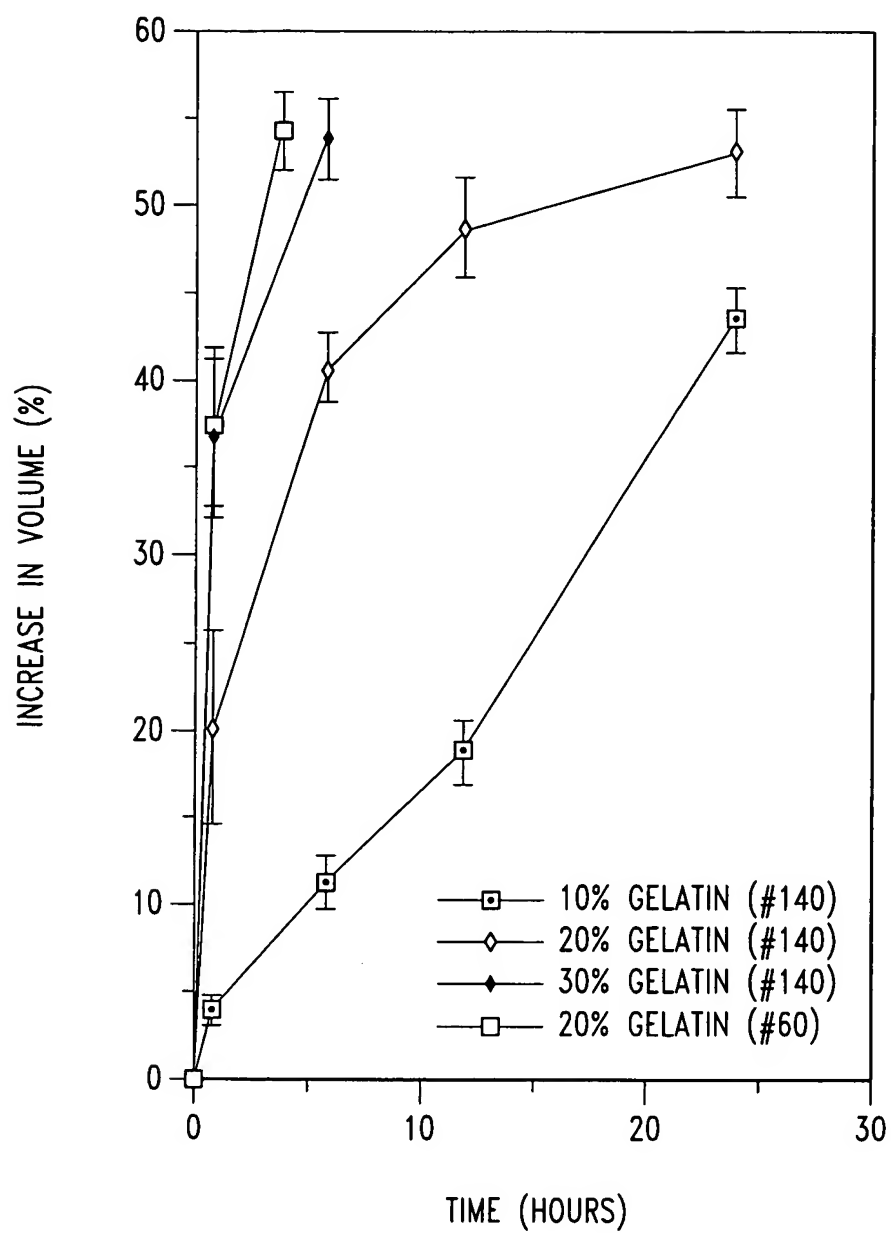


Fig. 17B



Fig. 18B



Fig. 18D



Fig. 18A



Fig. 18C

Title: COMPOSITIONS AND METHODS FOR TREATING OR PREVENTING DISEASES OF BODY PASSAGEWAYS

Inventor(s): William L. Hunter and Lindsay S. Machan

Express Mail No. EV348170571US

Docket No. 110129.405C3



Fig. 19B



Fig. 19A

EFFECT OF TREATMENT ON THE WEIGHT OF TUMOURS AND MICE WEIGHTS.

| MOUSE NUMBER | MOUSE WEIGHT (g) | | TUMOUR WEIGHT (g) | |
|--------------|------------------|---------|-------------------|---------|
| | CONTROL | TREATED | CONTROL | TREATED |
| 1 | 19.4 | 19.0 | 1.76 | 1.14 |
| 2 | 20.4 | 18.6 | 1.85 | 1.98 |
| 3 | 20.6 | 19.5 | 2.4 | 0.65 |
| 4 | 19.8 | 18.5 | 2.31 | 0.20 |
| 5 | 20.0 | 18.9 | 3.2 | 0.35 |
| 6 | — | 19.1 | — | 1.51 |
| 7 | — | 19.9 | — | 0.61 |
| 8 | — | 19.3 | — | 0.40 |
| MEAN | 20.4 | 19.1 | 2.3 | 0.85 |
| STD. DEV. | 0.47 | 0.46 | 0.57 | 0.62 |

Fig. 20

MELTING TEMPERATURE, ENTHALPY, MOLECULAR WEIGHT (M_n), POLYDISPERSITY (M_w/M_n), AND INTRINSIC VISCOSITY ($[\eta]$) OF PDLLA-PEG-PDLLA

| PDLLA-PEG-PDLLA PEG CONTENT | MELTING TEMP. ^a , °C | ΔH^a , J/g | M_n^b , $\times 10^{-4}$ | M_w/M_n^b | $[\eta]^c$, dl/g |
|--------------------------------|------------------------------------|--------------------|----------------------------|-------------|-------------------|
| 100% | 61.8 | 184.8 | 0.8 ^d | -- | -- |
| 70% | 50.2 | 72.2 | 2.1 | 1.21 | 0.27 |
| 40% | 46.3 | 42.8 | 4.5 | 3.5 | 0.29 |
| 30% | NONE | NONE | 5.9 | 2.95 | 1.0 |
| 20% | NONE | NONE | 5.1 | 2.96 | 1.45 |
| 10% | NONE | NONE | 11 | 2.38 | 1.5 |
| TAXOL | 212 | 59.3 | -- | -- | -- |
| 20% taxol loaded | 212.1 | 5.6 | -- | -- | -- |
| COPOLYMER (30%PEG) | | | | | |

a: MEASURED BY DSC.

b: MEASURED BY GPC, RELATIVE TO POLYSTYRENE STANDARD.

c: IN $CHCl_3$ AT 25°C

d: DATA SUPPLIED BY MANUFACTURER

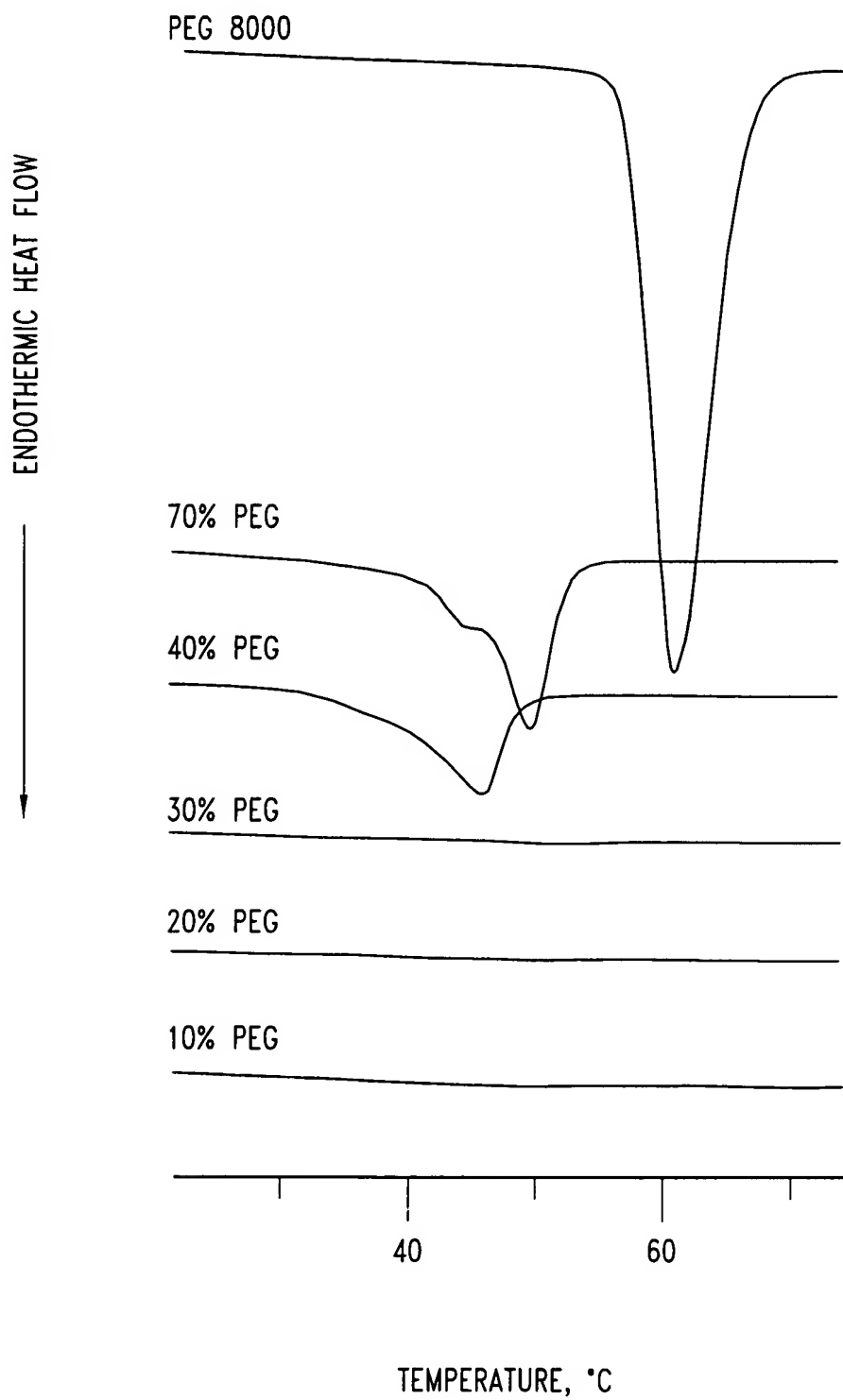


Fig. 22

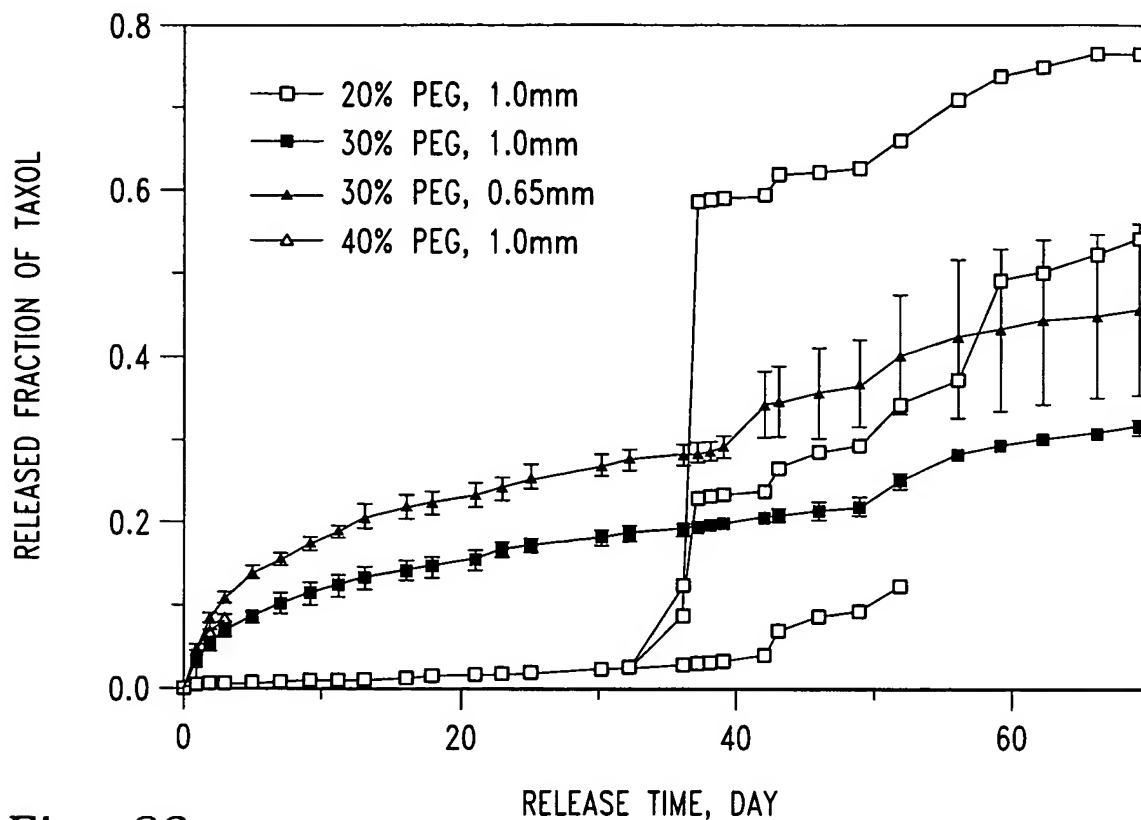


Fig. 23

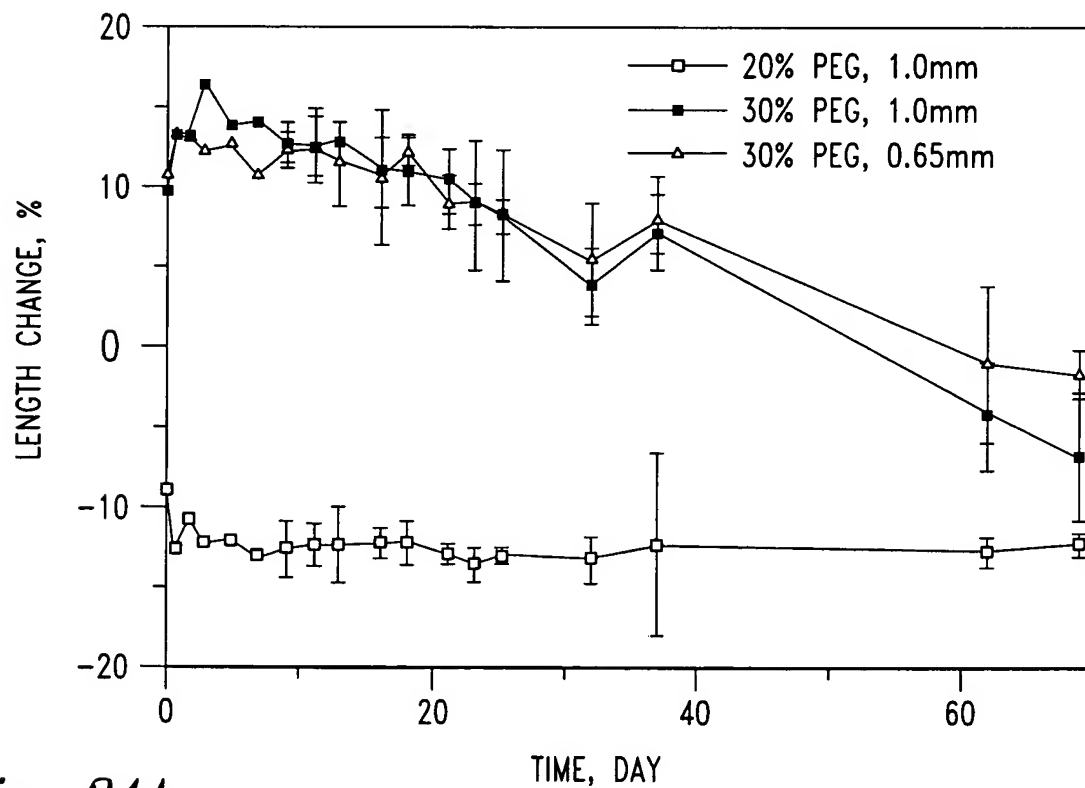


Fig. 24A

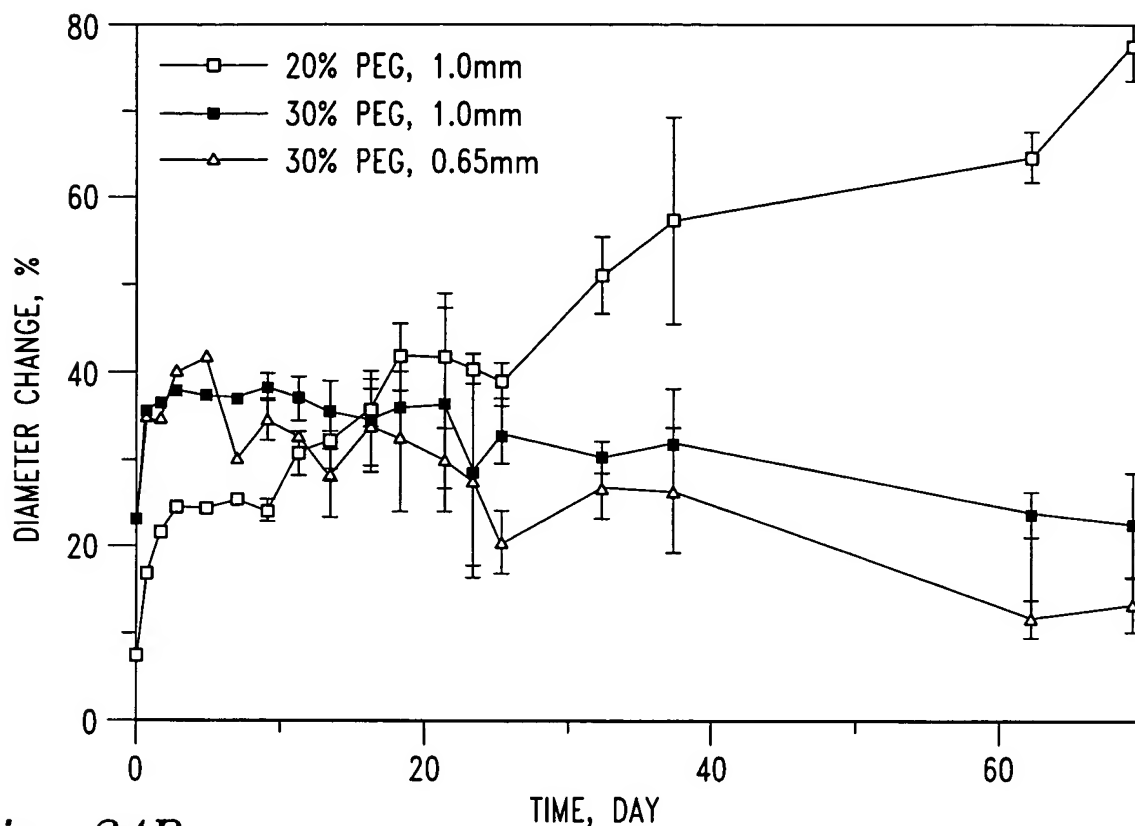


Fig. 24B

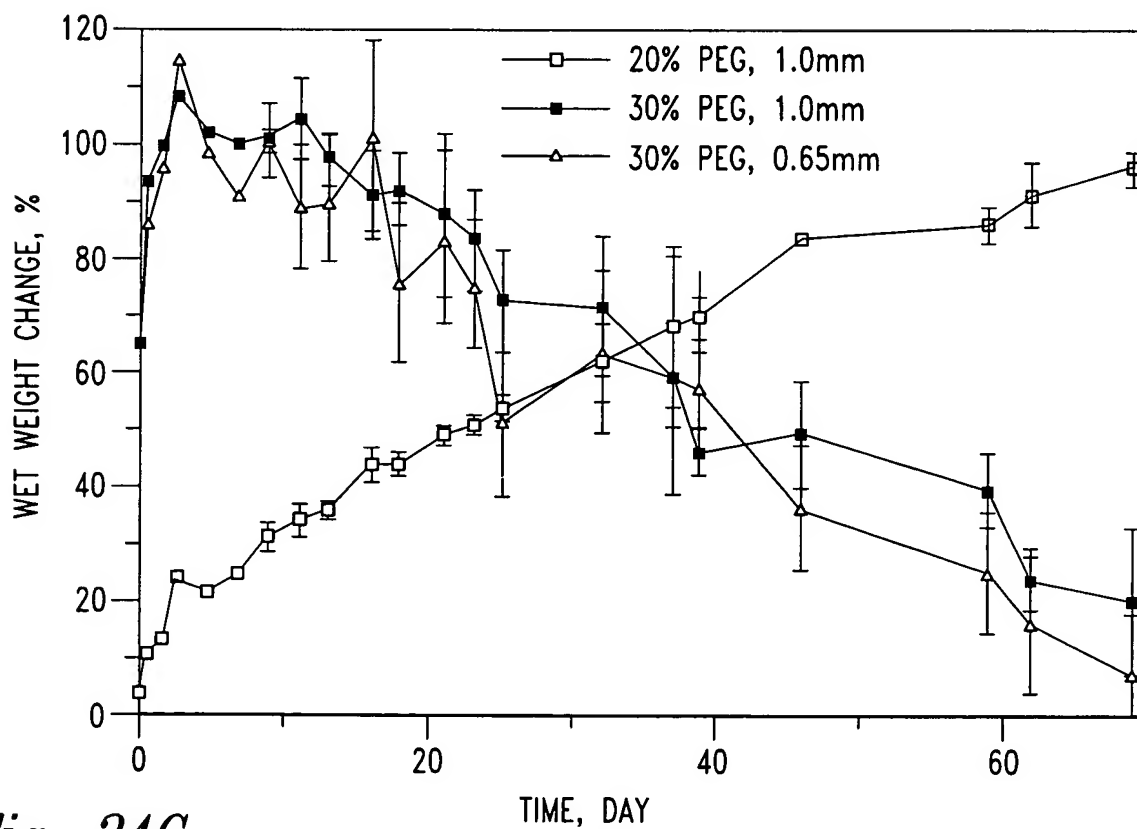


Fig. 24C

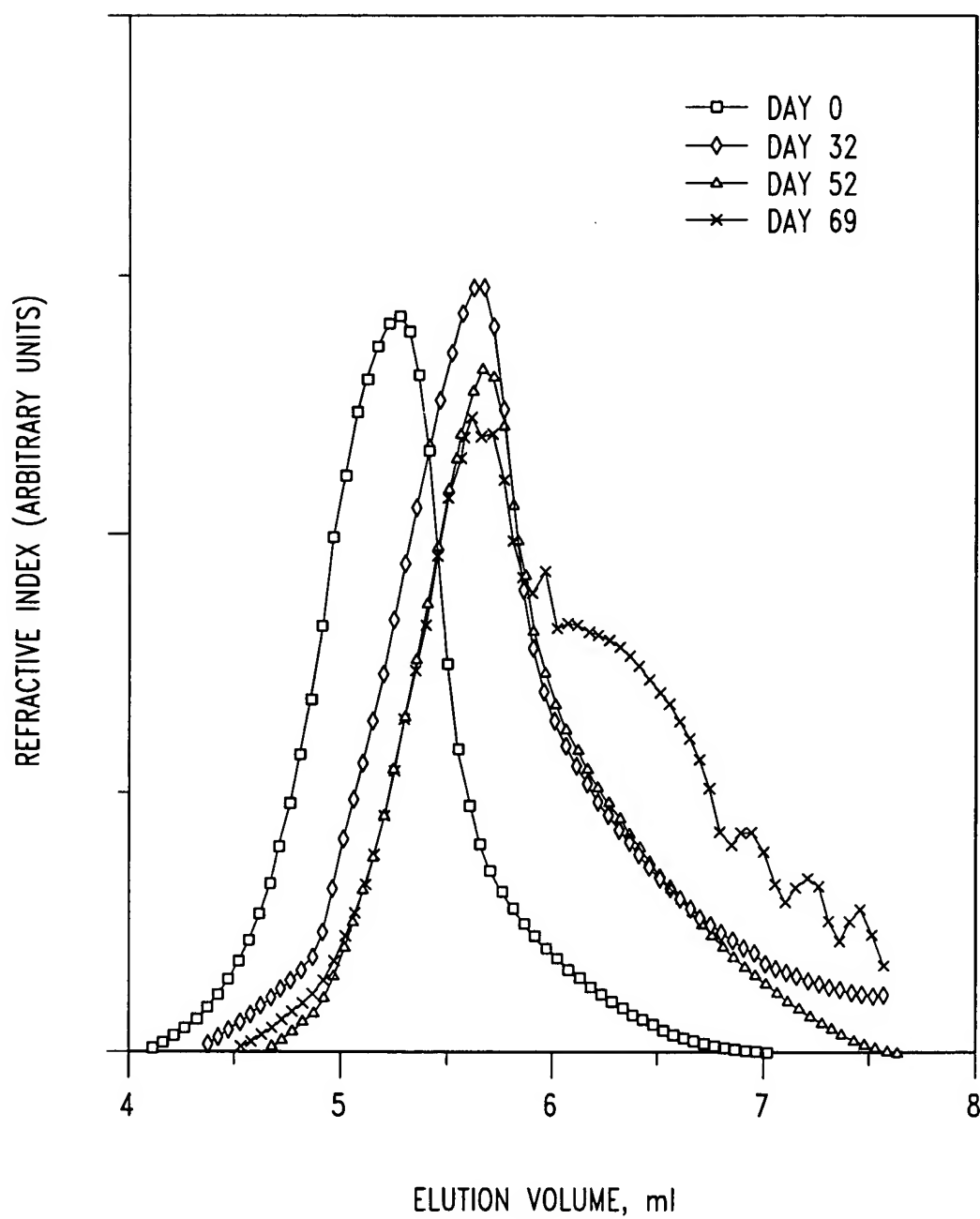


Fig. 25

MASS LOSS AND POLYMER COMPOSITION CHANGE OF PDLLA-PEG-PDLLA
CYLINDERS (LOADED WITH 20% TAXOL) DURING THE RELEASE
INTO PBS ALBUMIN BUFFER AT 37

°C

| SAMPLE ^a | TIME, DAY | DRY WT. LOSS, % | 1.65/5.1 ^b | 3.6/5.1 ^b |
|---------------------|-----------|-----------------|-----------------------|----------------------|
| 20% PEG-1mm | 0 | 0 | 3.51 | 1.65 |
| 20% PEG-1mm | 32 | 7.9 | — | — |
| 20% PEG-1mm | 69 | 19.2 | 3.63 | 0.68 |
| 30% PEG-1mm | 0 | 0 | 3.39 | 3.91 |
| 30% PEG-1mm | 32 | 28.9 | — | — |
| 30% PEG-1mm | 69 | 45.5 | 4.3 | 0.56 |
| 30% PEG-0.65mm | 0 | 0 | 3.39 | 3.91 |
| 30% PEG-0.65mm | 32 | 26.7 | — | — |
| 30% PEG-0.65mm | 69 | 57.5 | 5.8 | 0.21 |

a: PDLLA-PEG-PDLLA copolymer cylinders showing PEG content and diameter of cylinder.

b: measured by ¹H-NMR in CDCl₃; 1.65/5.1 represents the ratio of peak areas at 1.65ppm (due to -CHCH₃*- in PDLLA) and 5.1 ppm (due to -CH*CH₃- in PDLLA); 3.6/5.1 represents the ratio of peak areas at 3.6ppm (due to -CH₂*CH₂*- in PEG) and 5.1ppm.

Fig. 26



Fig. 27B

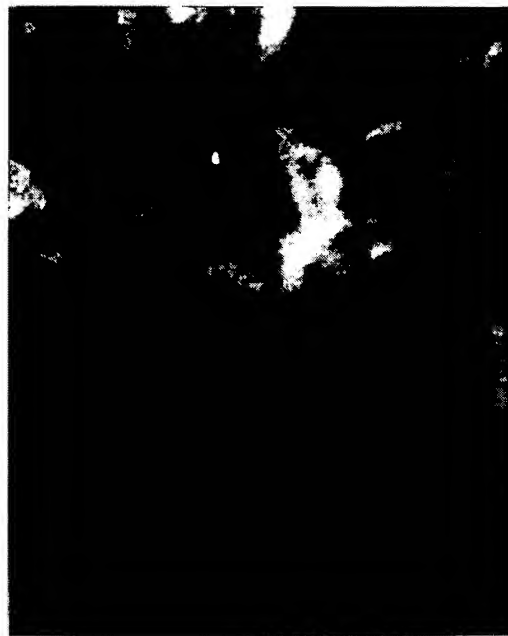


Fig. 27D



Fig. 27A

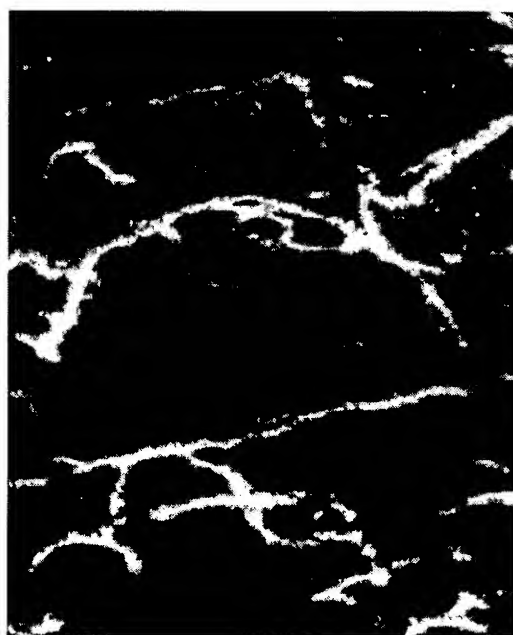


Fig. 27C

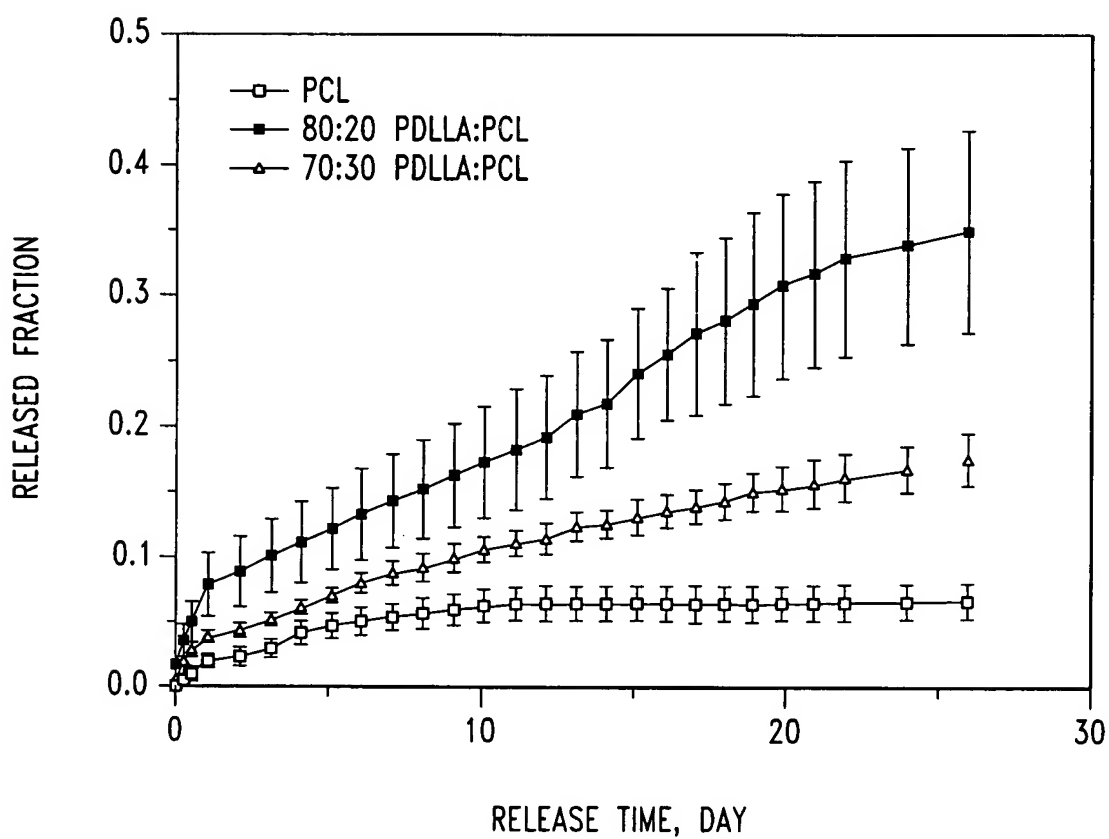


Fig. 28

Efficacy of taxol loaded surgical paste formulations applied locally to subcutaneous tumor in mice.

| | non-treated | PCL | | 80:20 PDLLA:PCL blend | | 90:10 PDLLA:PCL blend | | PDLLA-PEG-PDLLA ^a | |
|-------------------------|-------------|---------|-----------|-----------------------|-----------|-----------------------|-----------|------------------------------|-----------|
| | | control | 20% taxol | control | 20% taxol | control | 20% taxol | control | 20% taxol |
| n ^b | 5 | 5 | 4 | 5 | 5 | 12 | 15 | 10 | 13 |
| death ^c | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| weight ^d , g | 1.71 | 1.64 | 1.55 | 1.63 | 1.22 | 1.51 | 0.87 | 1.46 | 0.88 |
| std ^e | 0.61 | 0.68 | 0.49 | 0.75 | 0.49 | 0.84 | 0.57 | 0.71 | 0.42 |
| regression ^f | -- | -- | 5.7% | -- | 25.2% | -- | 54.0% | -- | 39.9% |
| p ^g | -- | -- | 0.818 | -- | 0.331 | -- | 0.0269 | -- | 0.0231 |

a: with 30% PEG

b: the number of mice

c: the number of deaths of mice during the experiment

d: the average weight of the tumor

e: standard deviation of the tumor weights

f: percentage of tumor weight reduction

g: the significance level obtained using a two tail t-test

Fig. 29

Time course of taxol release from PCL thermopaste

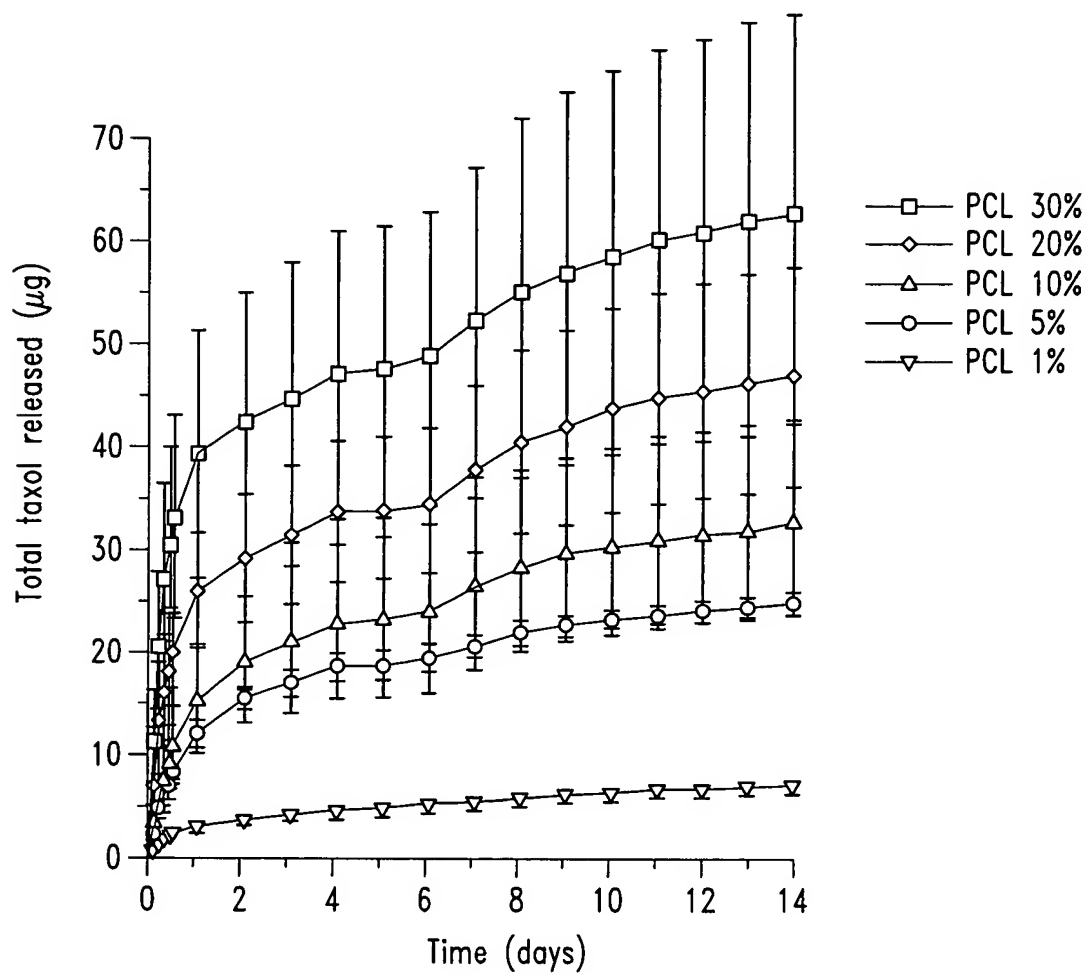


Fig. 30A

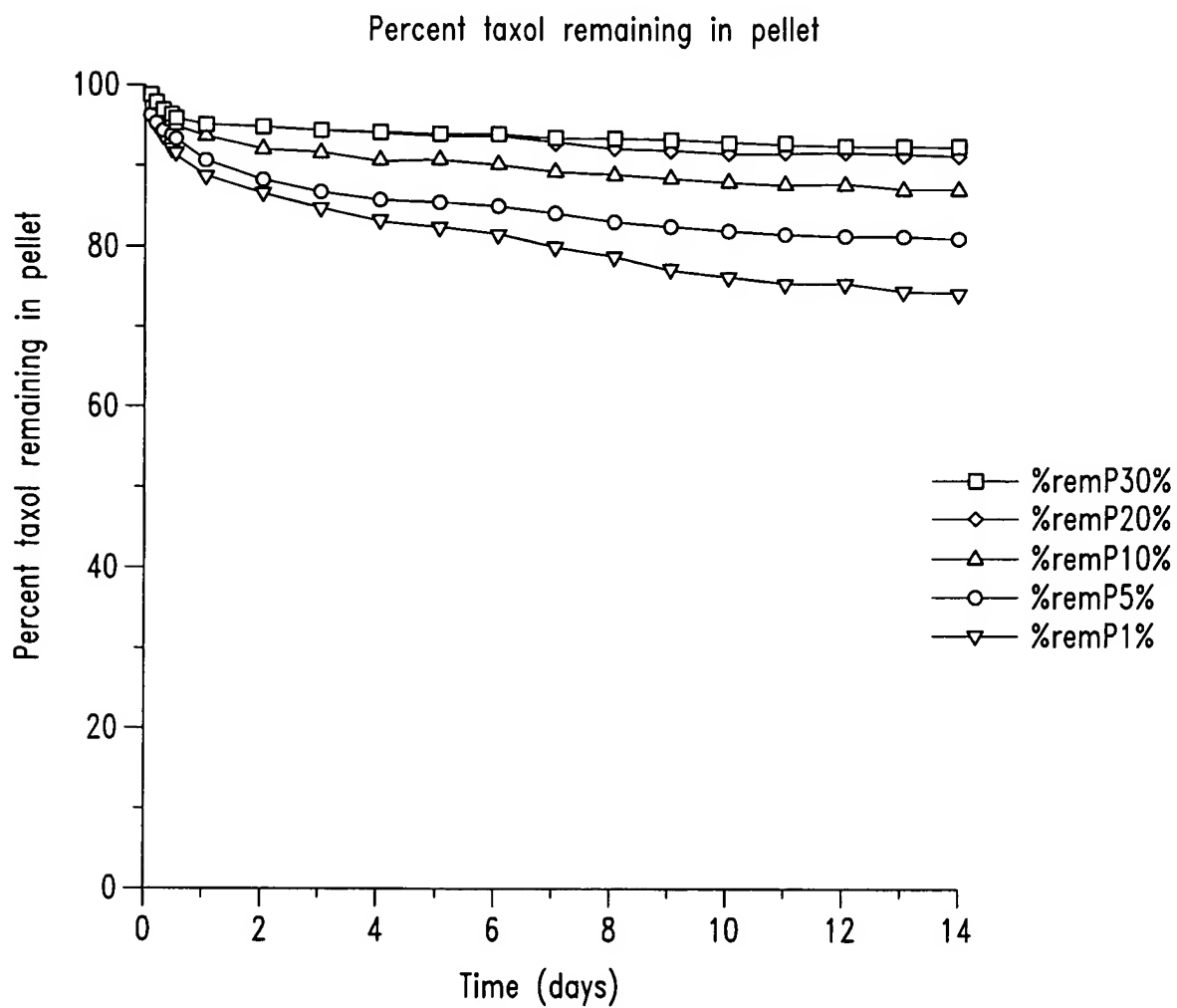


Fig. 30B

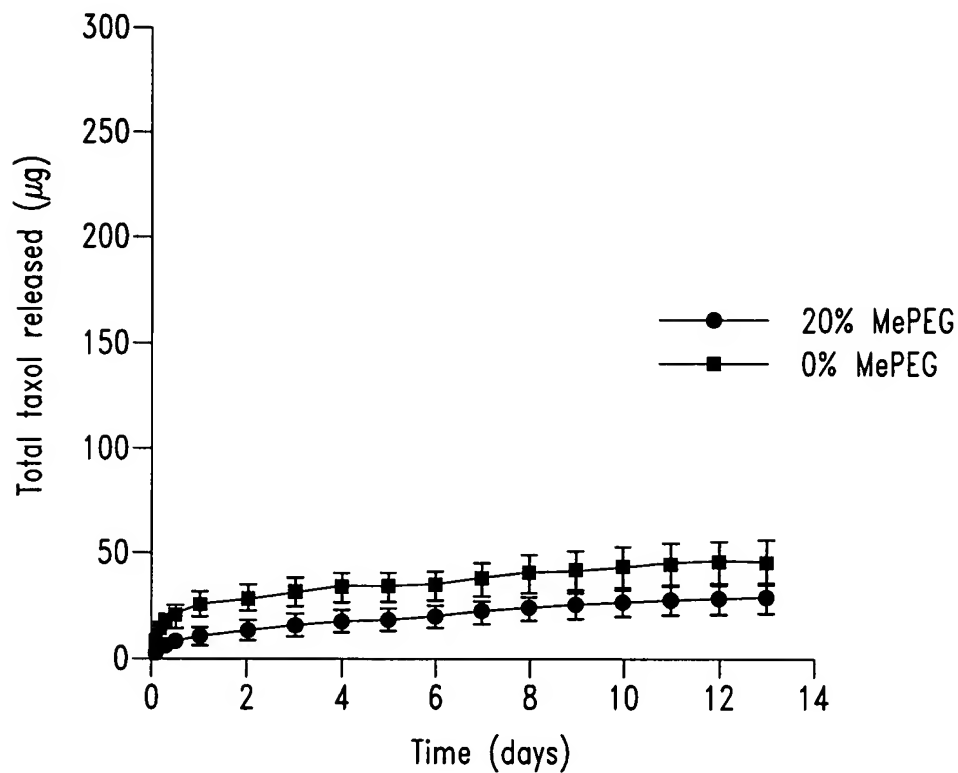


Fig. 31A

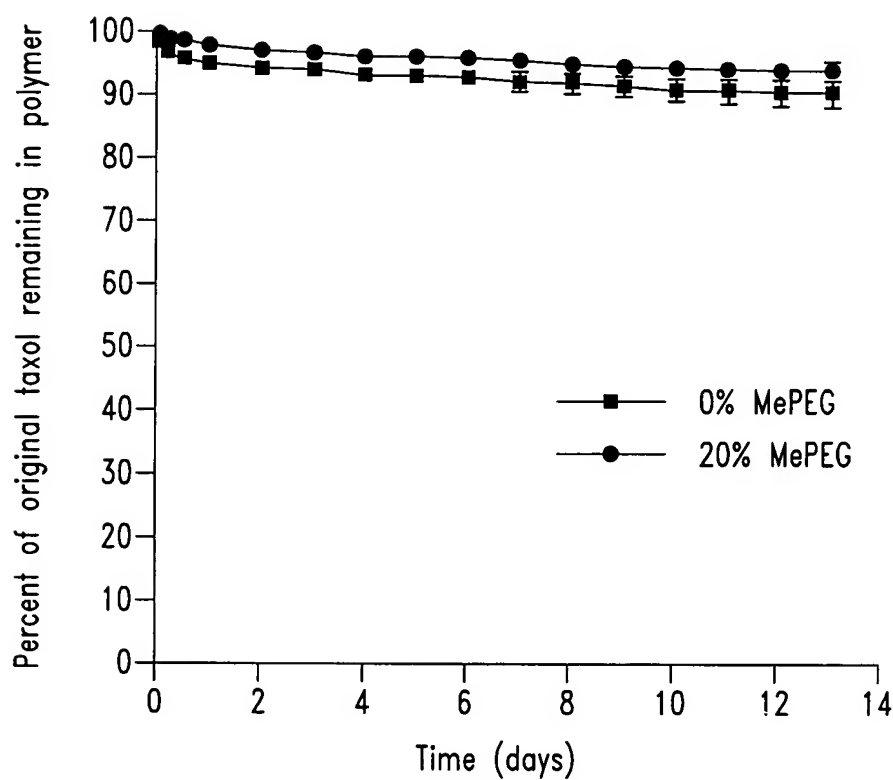


Fig. 31B

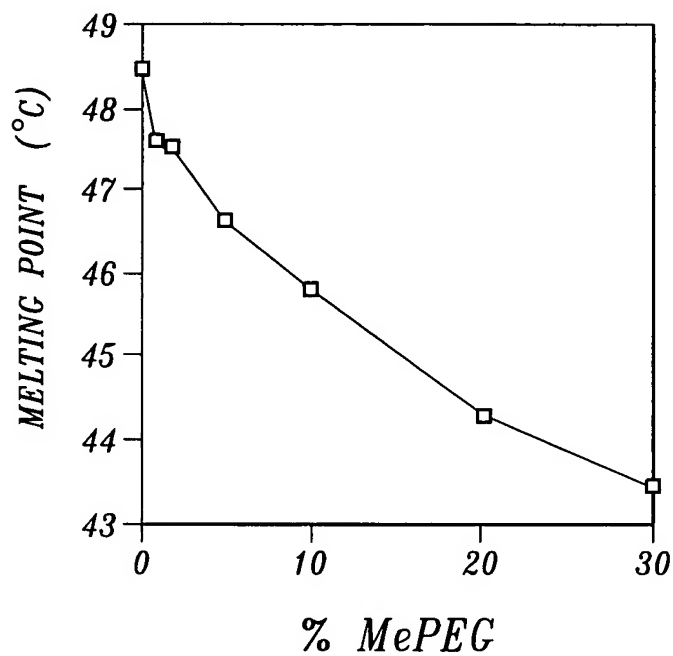


Fig. 32A

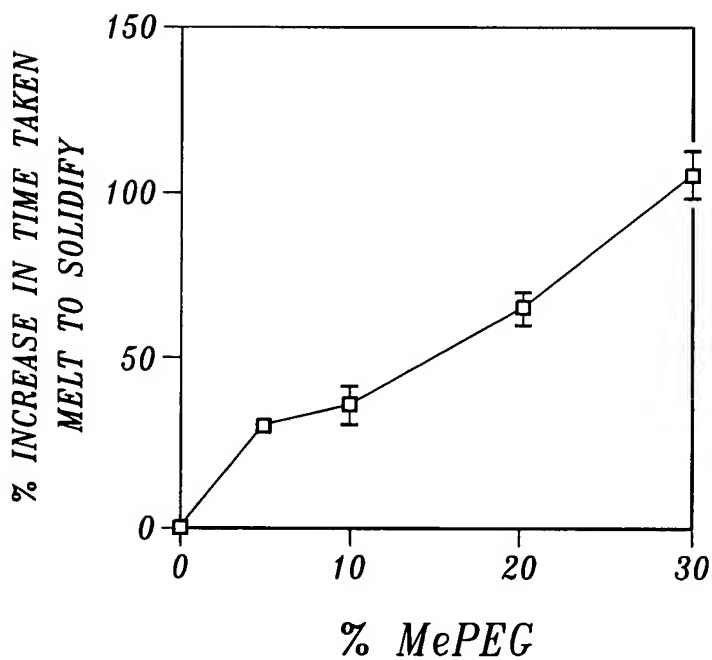


Fig. 32B

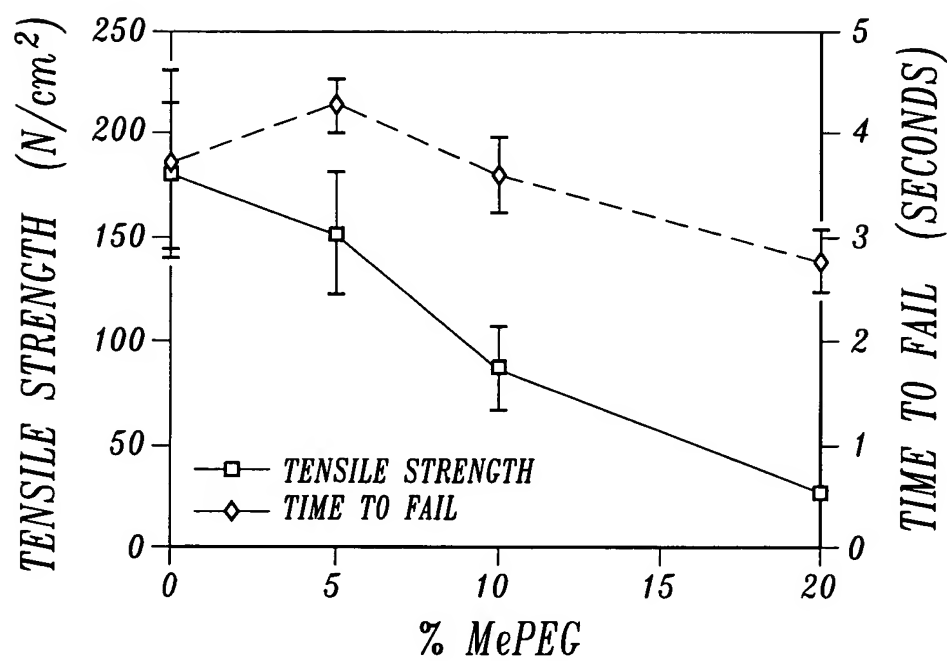


Fig. 33

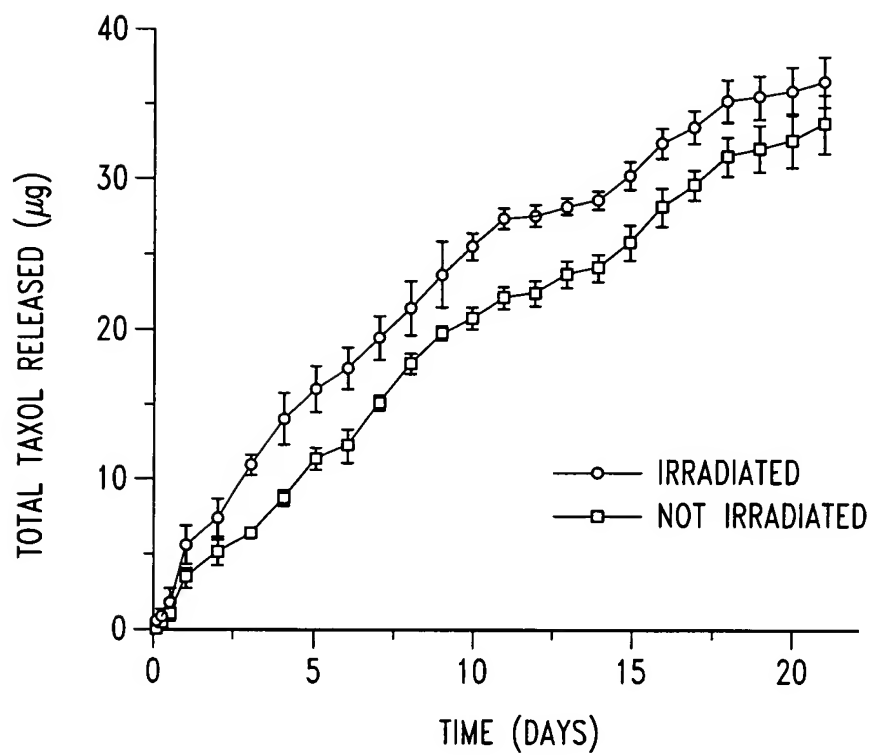
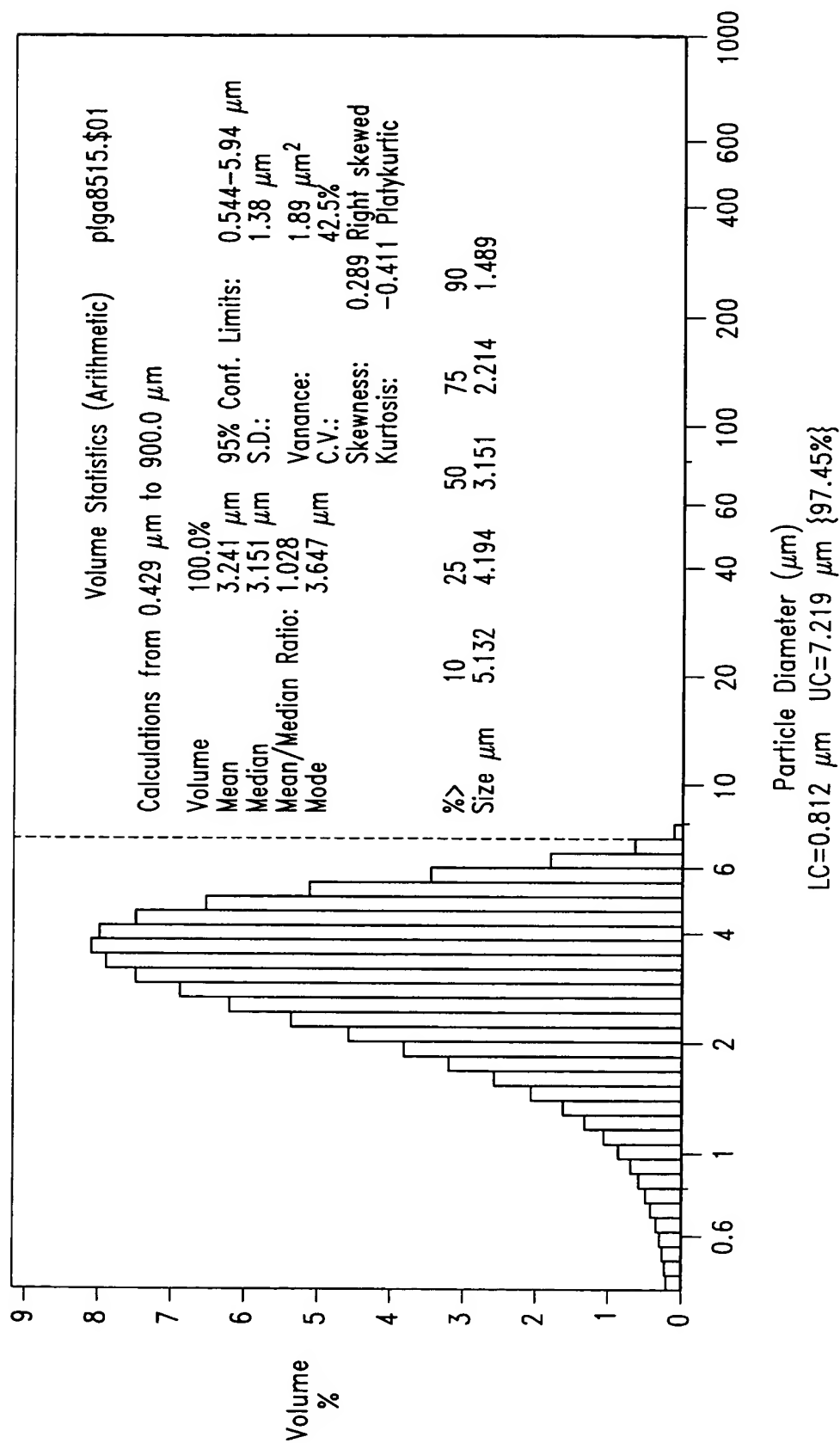


Fig. 34

*Fig. 35*

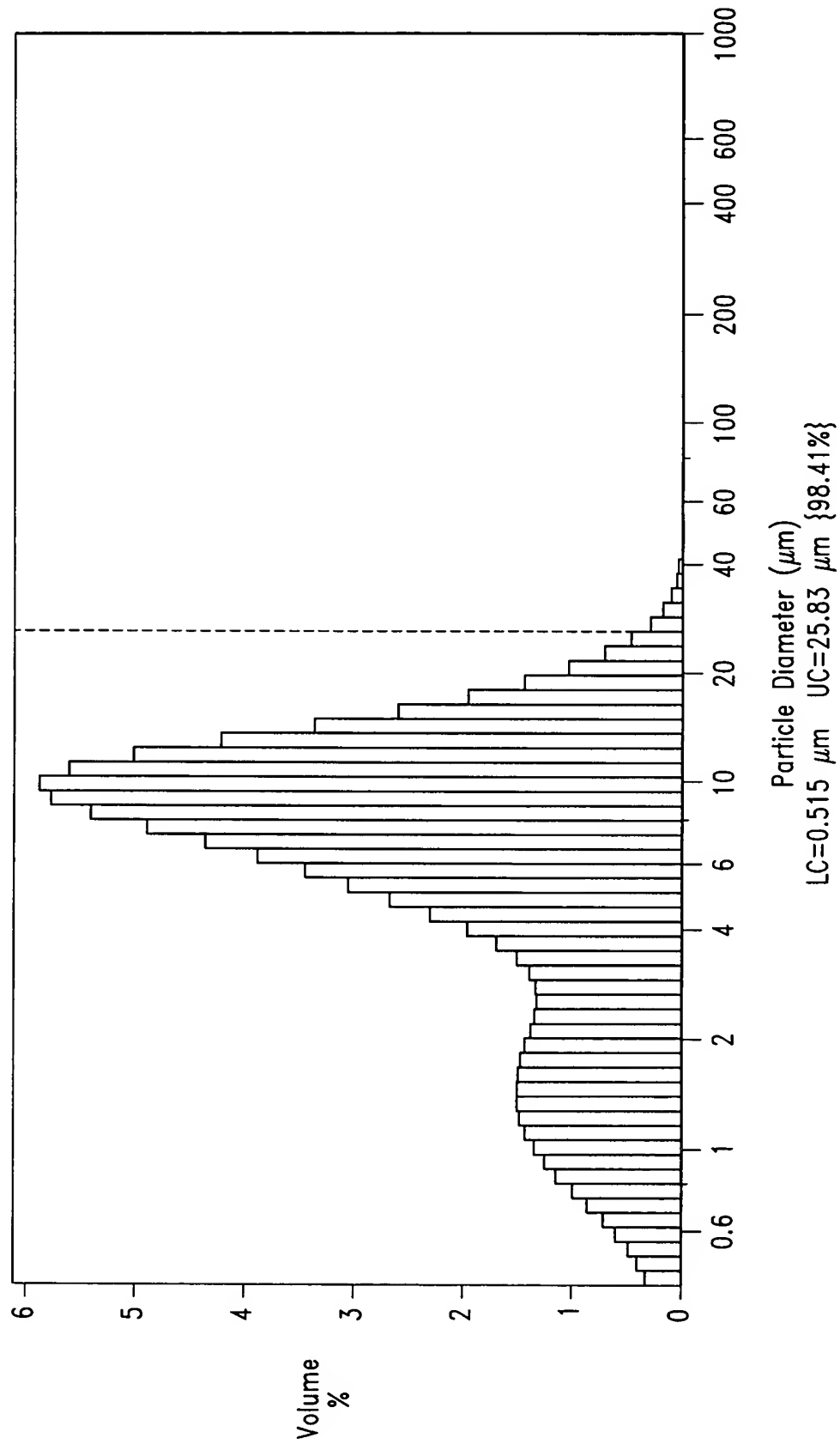


Fig. 36

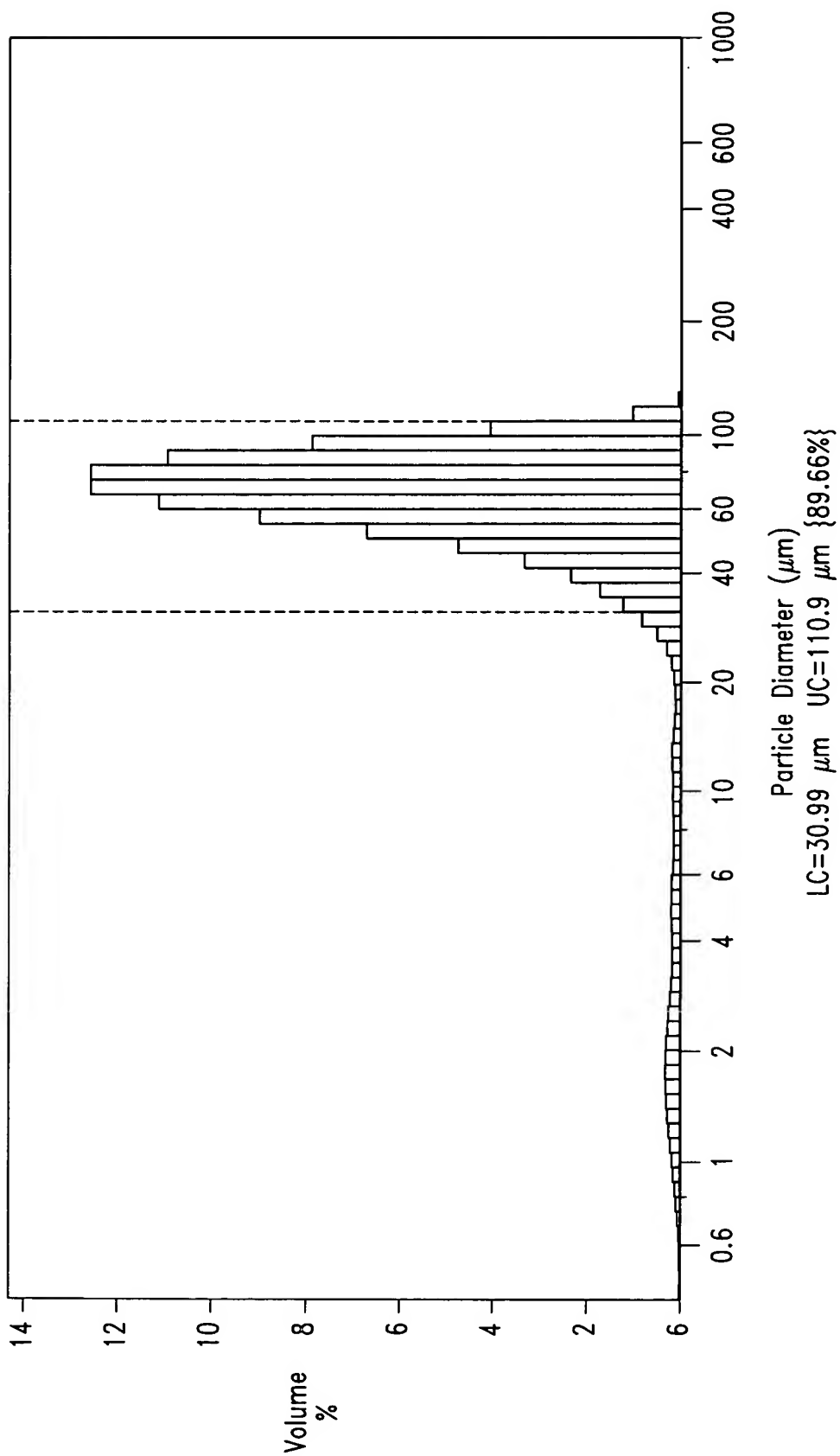


Fig. 37

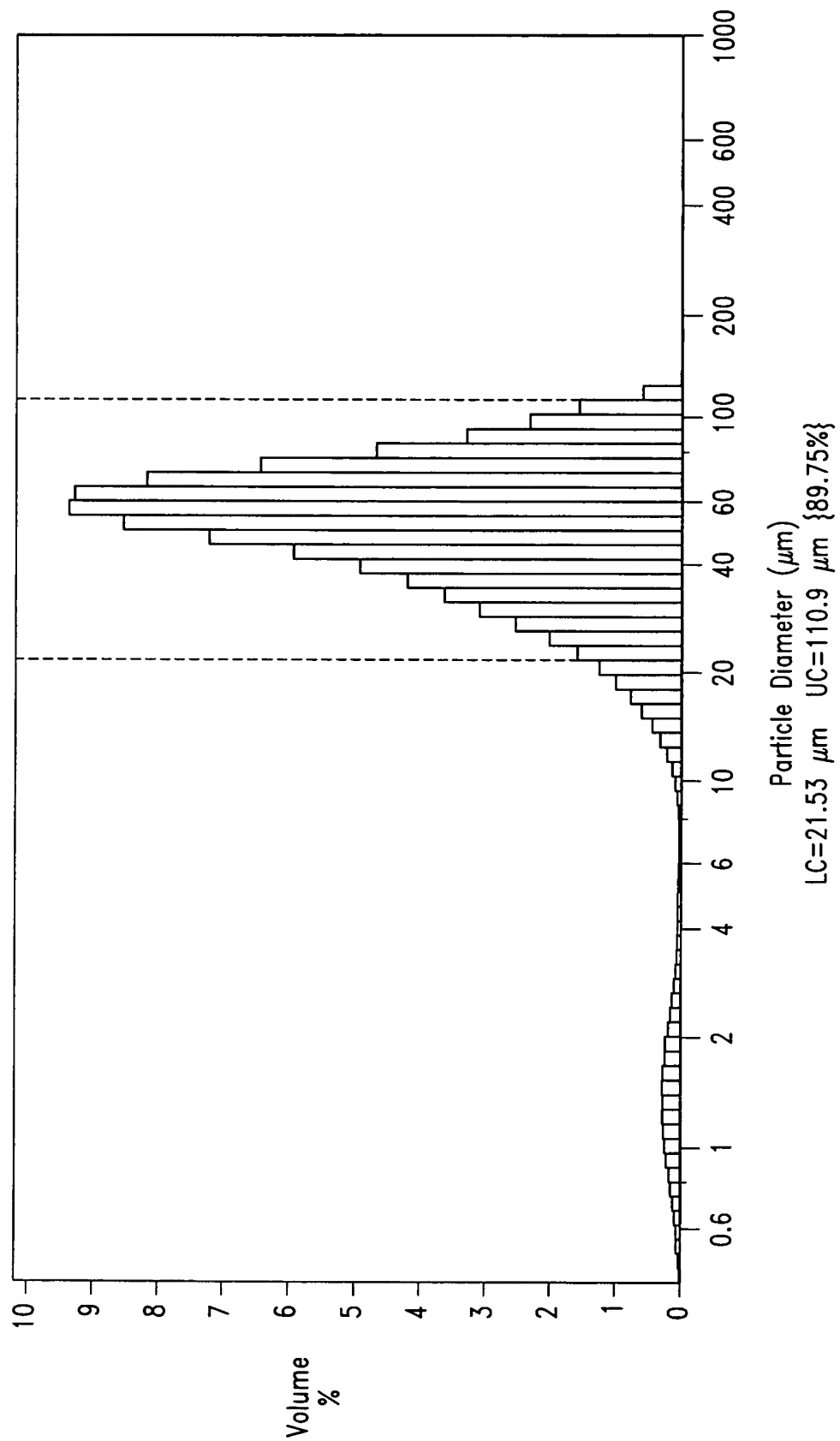


Fig. 38

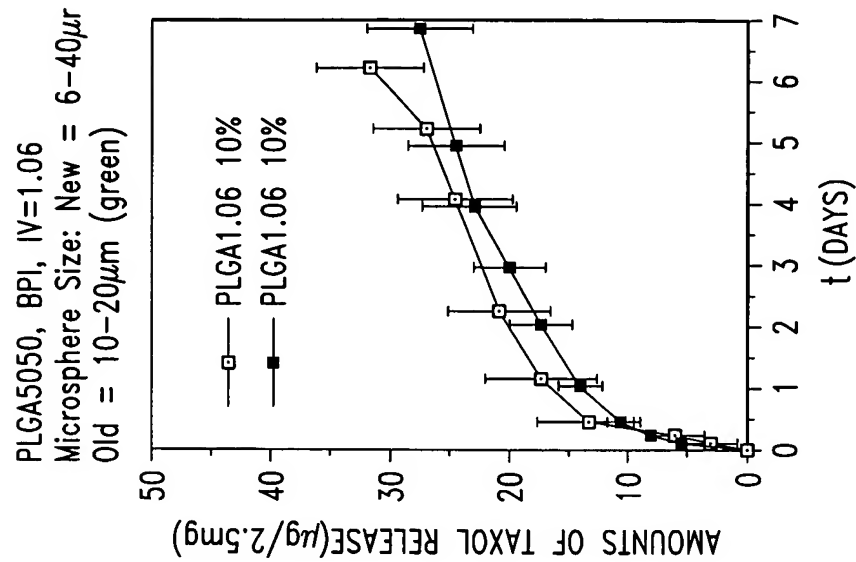


Fig. 39C

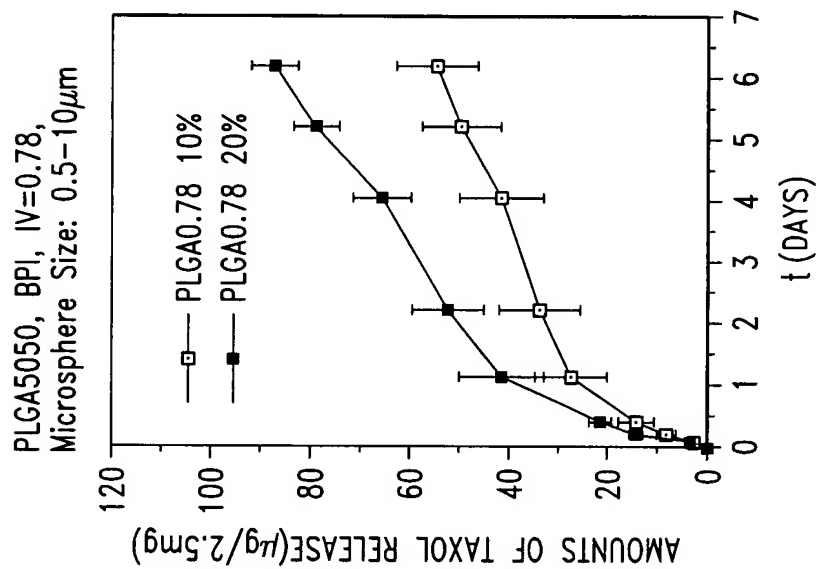


Fig. 39B

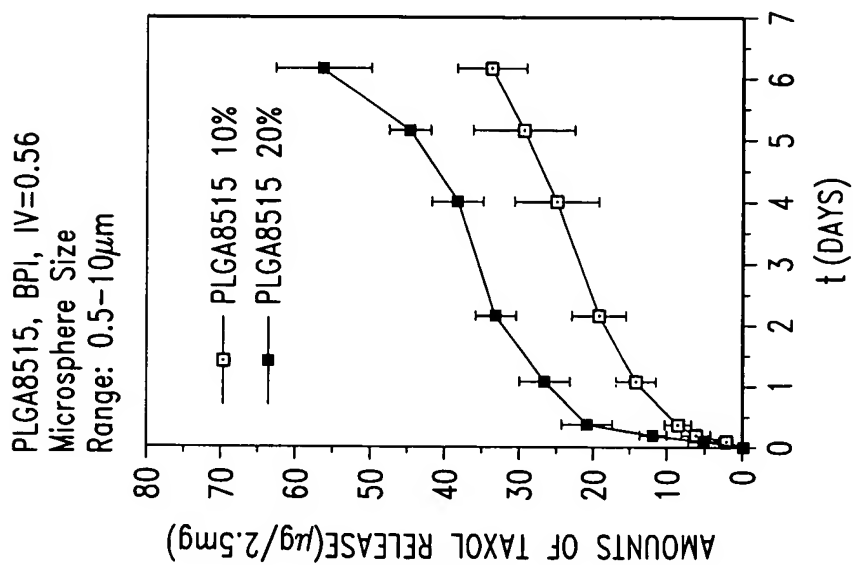


Fig. 39A

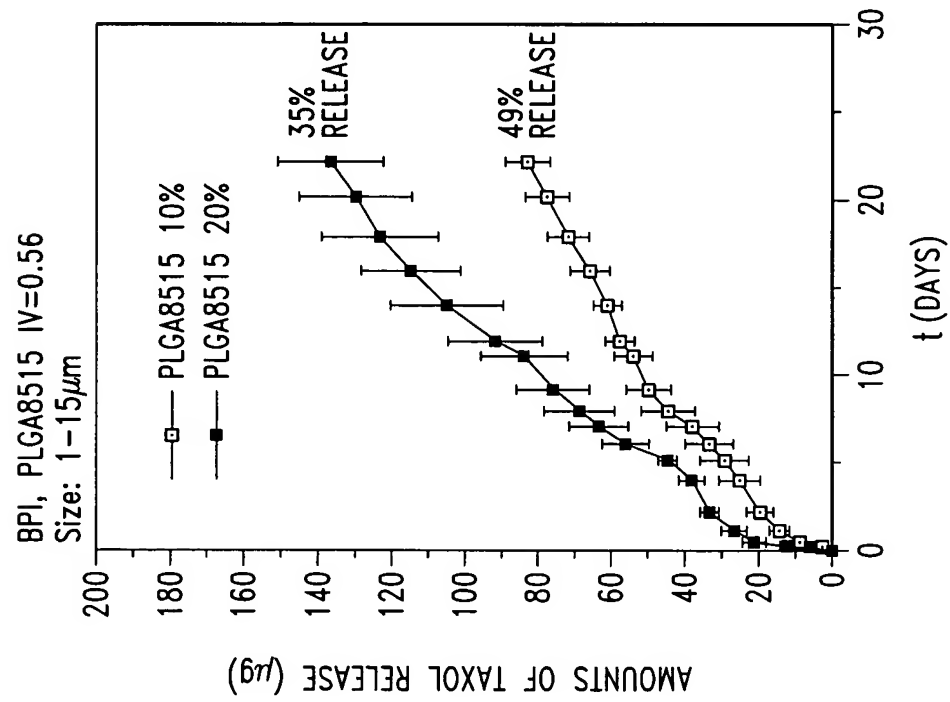


Fig. 40B

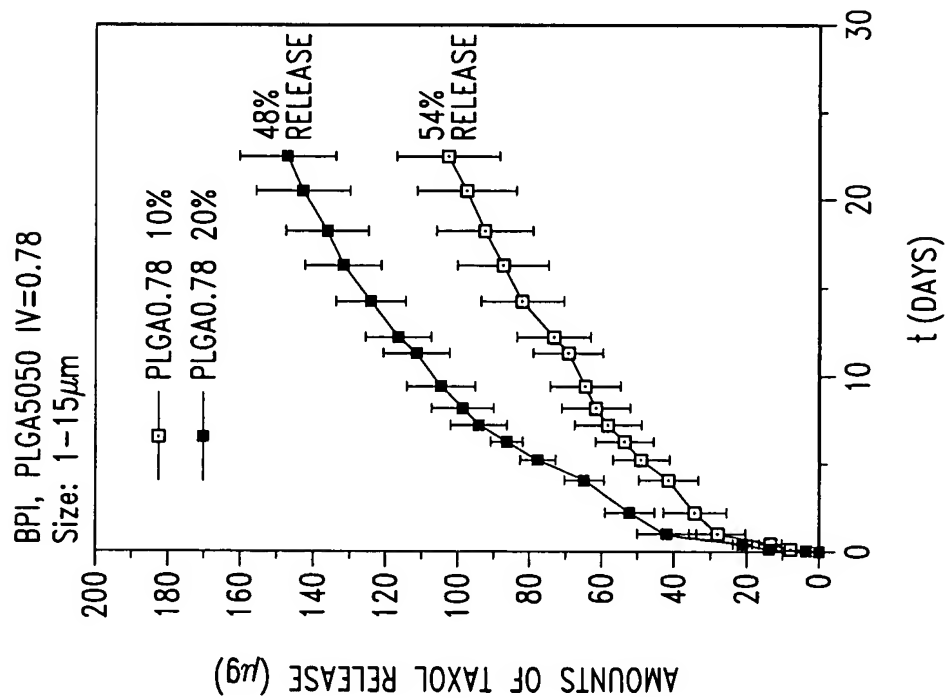


Fig. 40A

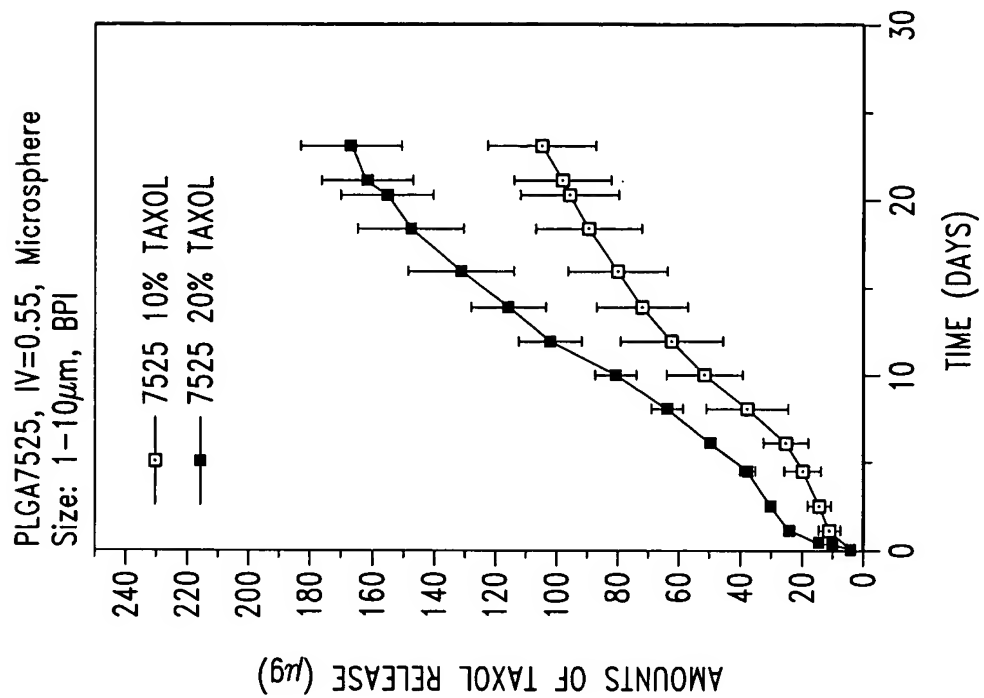


Fig. 41B

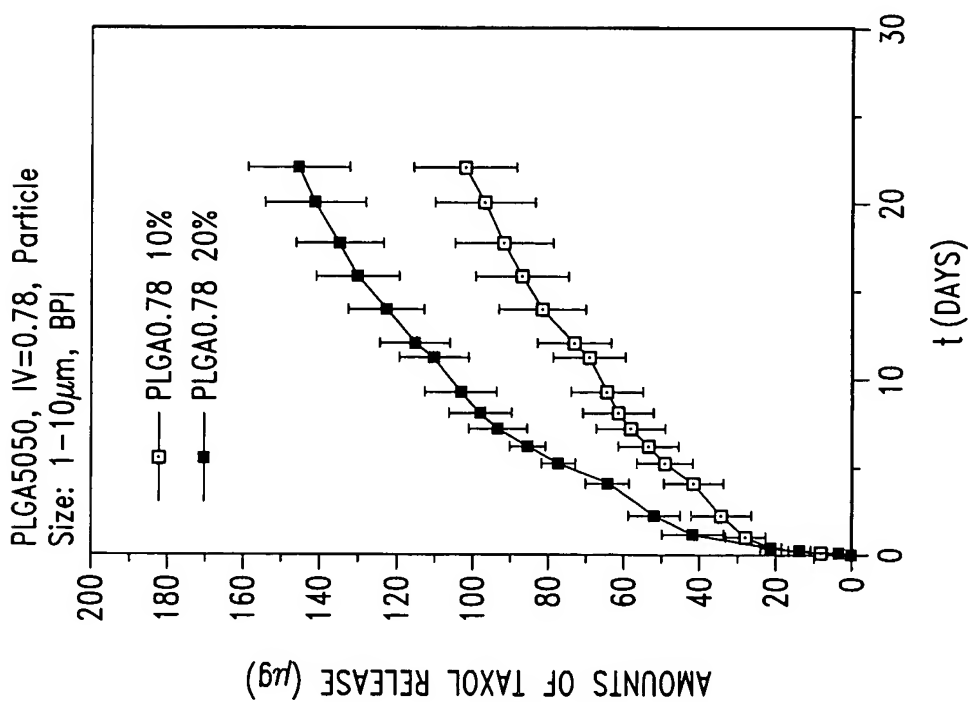


Fig. 41A

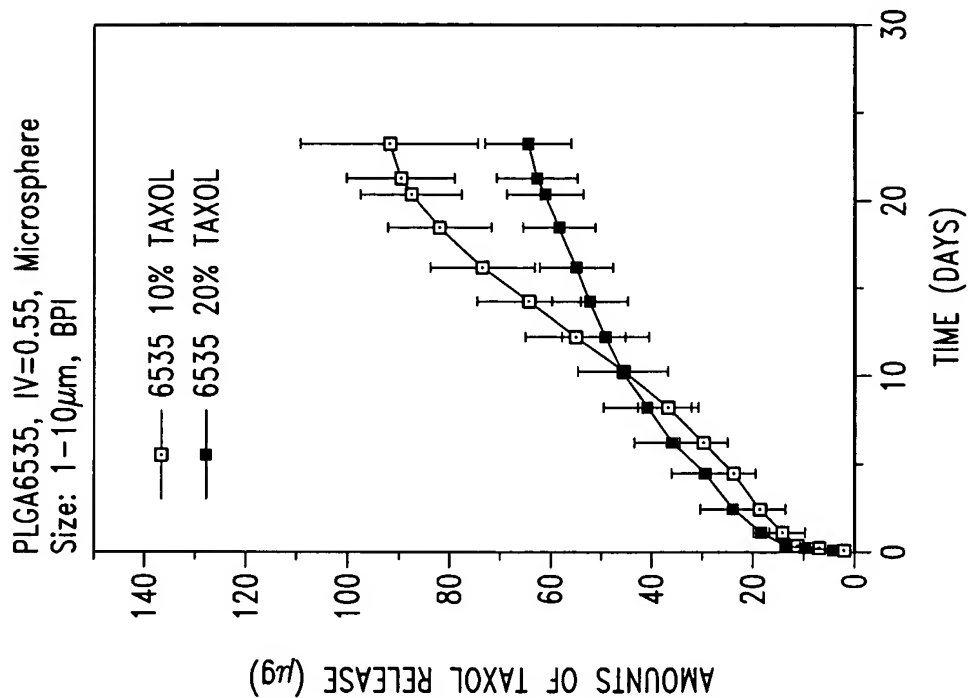


Fig. 42B

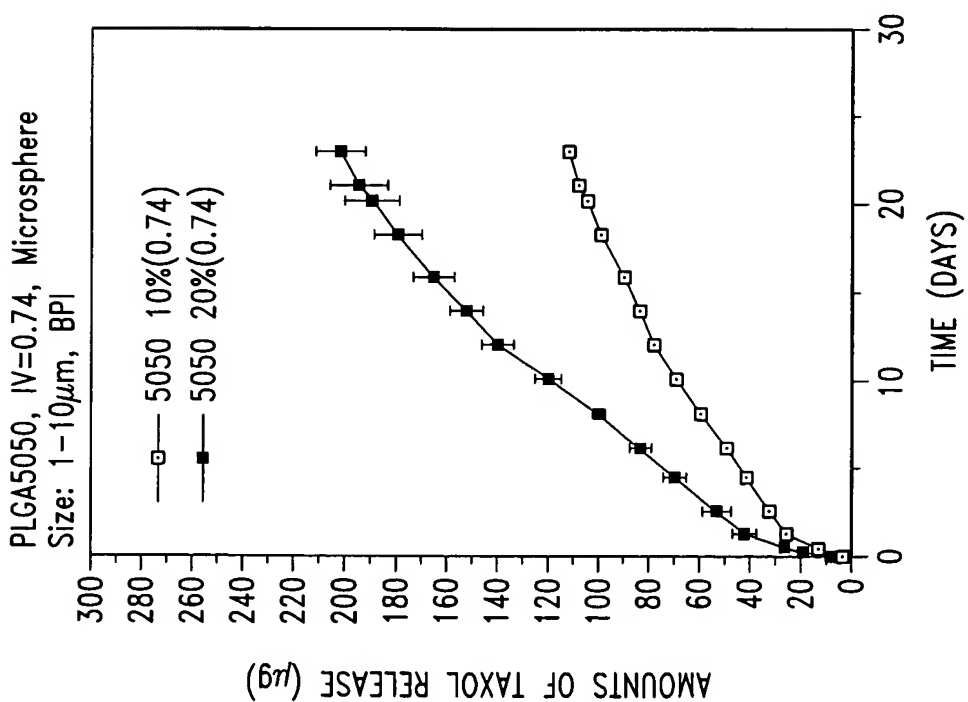


Fig. 42A

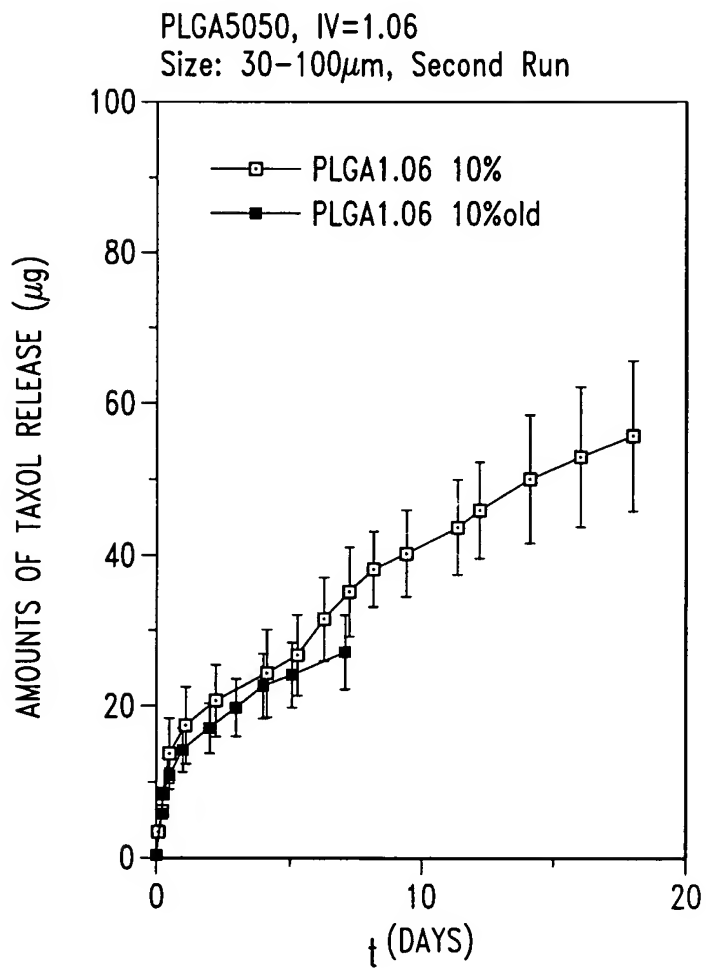


Fig. 42C

MOLECULAR WEIGHTS, CMCs AND MAXIMUM TAXOL LOADINGS OF THE DIBLOCK COPOLYMERS

| POLYMERS | MOLECULAR WEIGHT | | CMC AT 25°C, % | | MAX. TAXOL LOADING, % |
|---------------|------------------|-------|----------------|------------|--------------------------|
| | CALCULATED | GPC | INTENSITY | ANISOTROPY | |
| PDLLA-MePEG | | | | | |
| 2000-50/50 | 4000 | 5632 | 0.016 | 0.012 | 15 |
| 2000-40/60 | 3333 | 5339 | 0.03 | 0.016 | 10 |
| 5000-30/70 | 7142 | 14948 | 0.03 | 0.018 | 5 |
| 5000-20/80 | 6250 | 13745 | -- | -- | 3 |
| PCL-MePEG | | | | | |
| 2000-40/60 | 4000 | 6125 | -- | -- | 30 |
| 5000-30/70 | 7142 | 17703 | -- | -- | 10 |
| PDLLACL-MePEG | | | | | |
| 2000-20/20/60 | 4000 | 5575 | 0.05 | 0.07 | 30 |
| 5000-15/15/70 | 7142 | 15498 | 0.05 | 0.07 | 10 |

Fig. 43

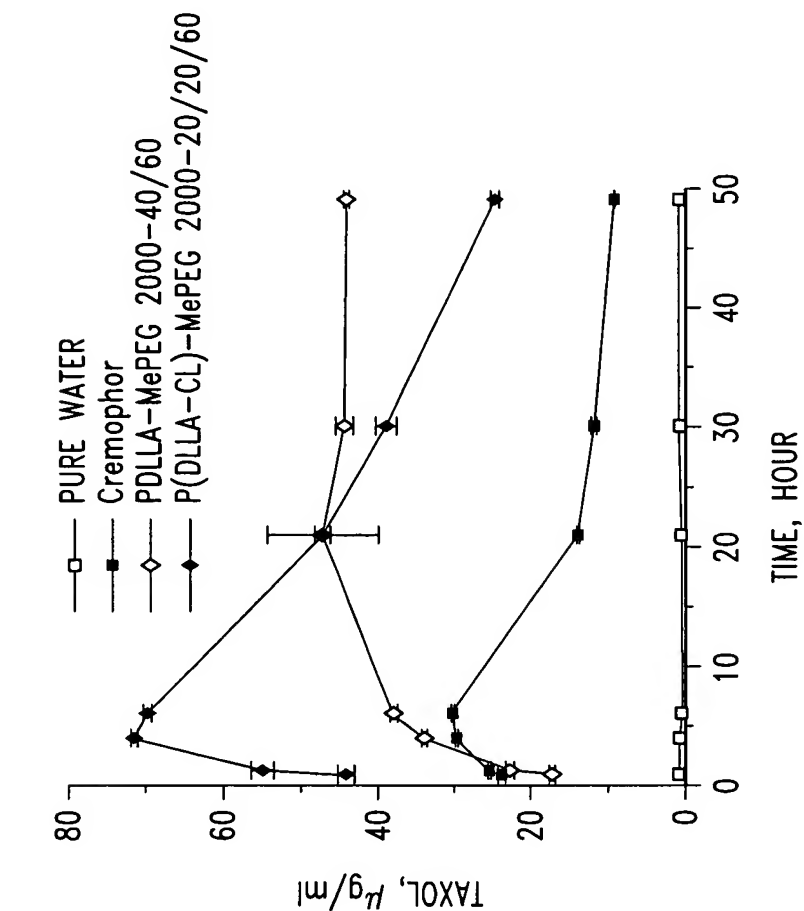


Fig. 44B

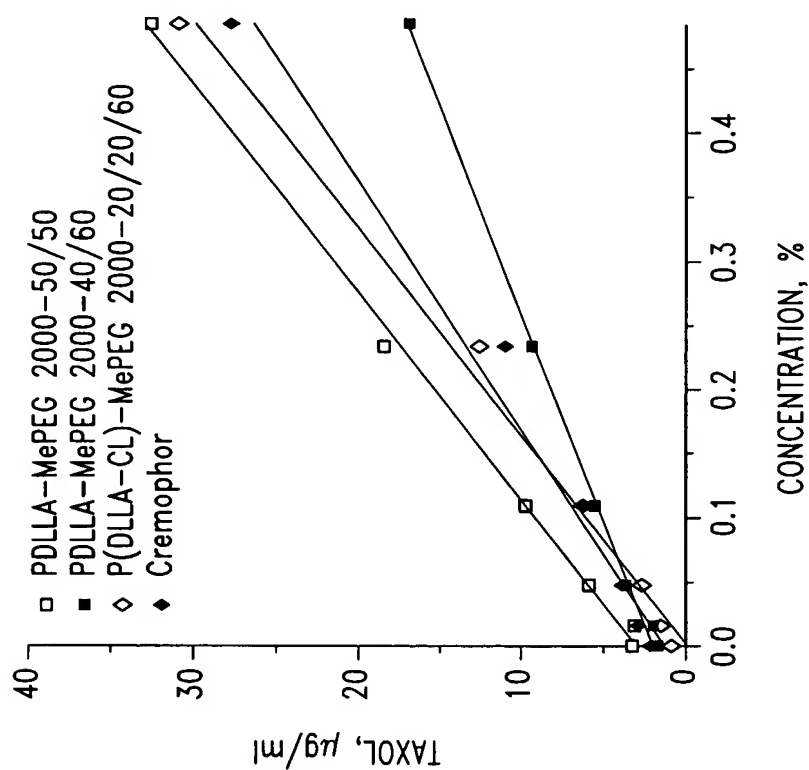


Fig. 44A

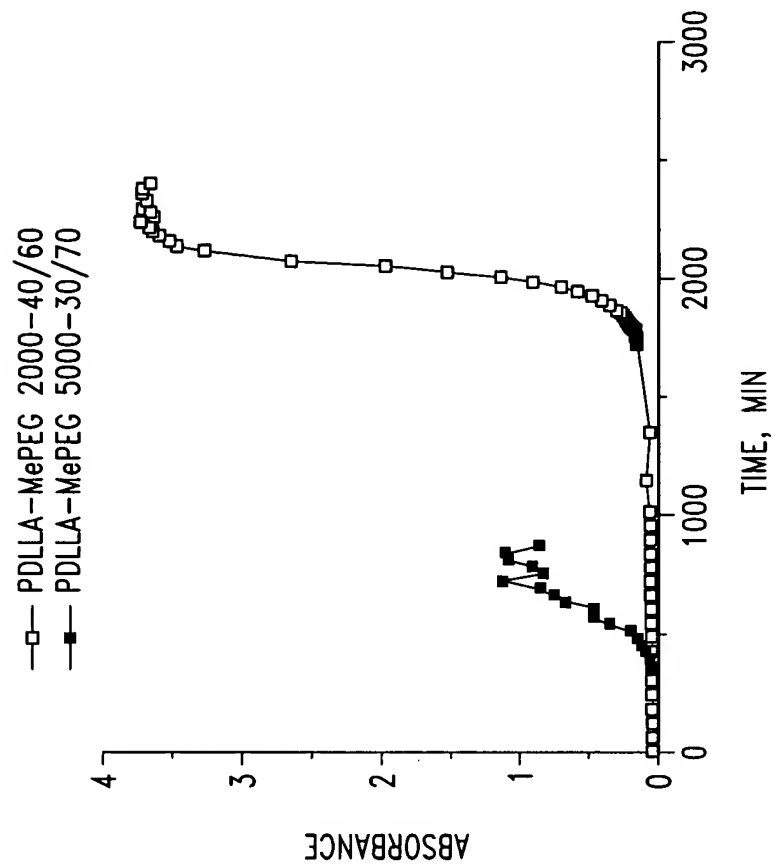


Fig. 45B

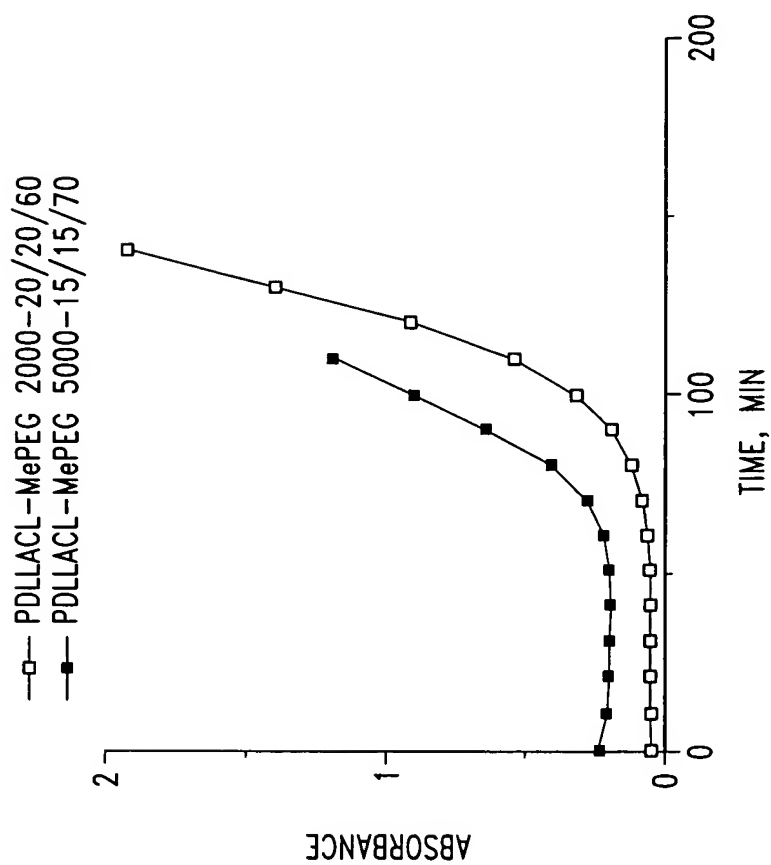


Fig. 45A

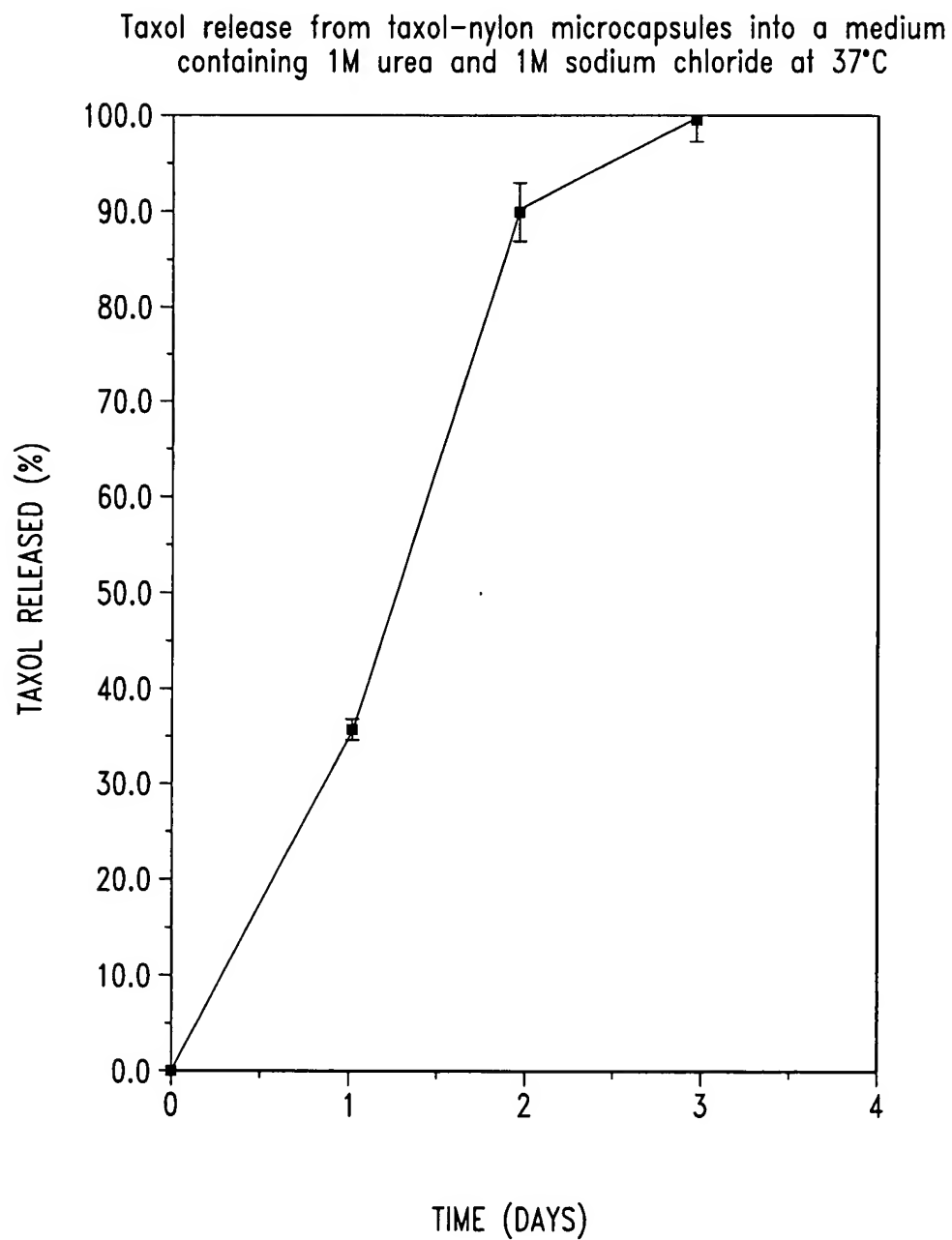


Fig. 46

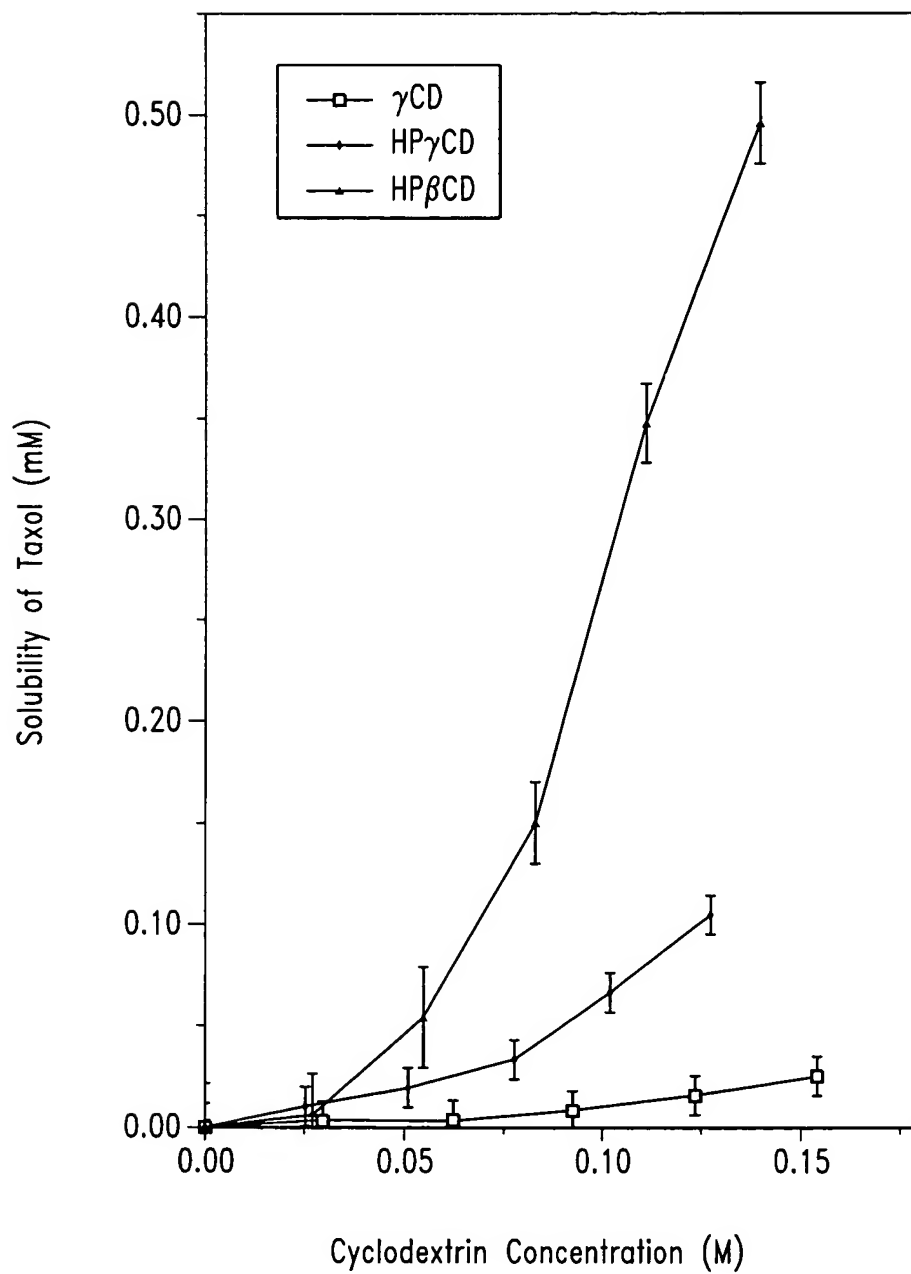


Fig. 47

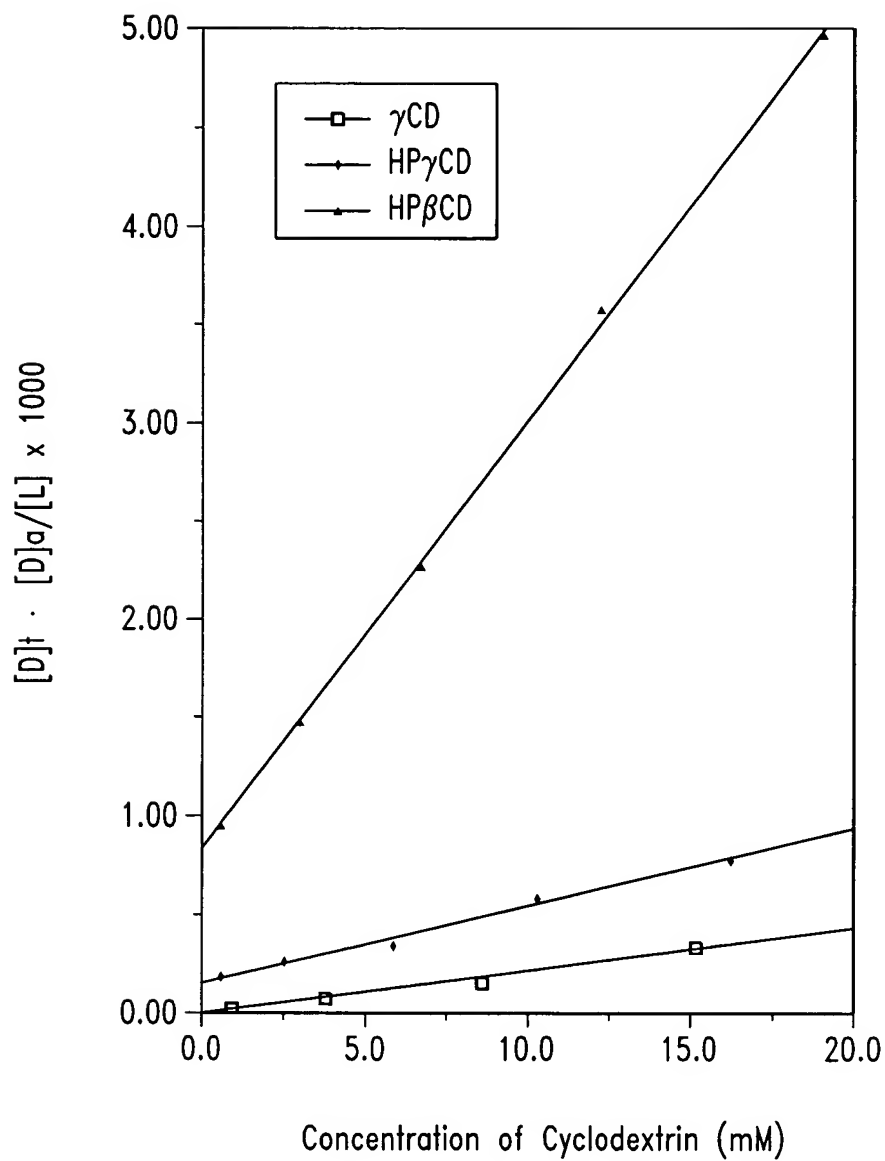


Fig. 48

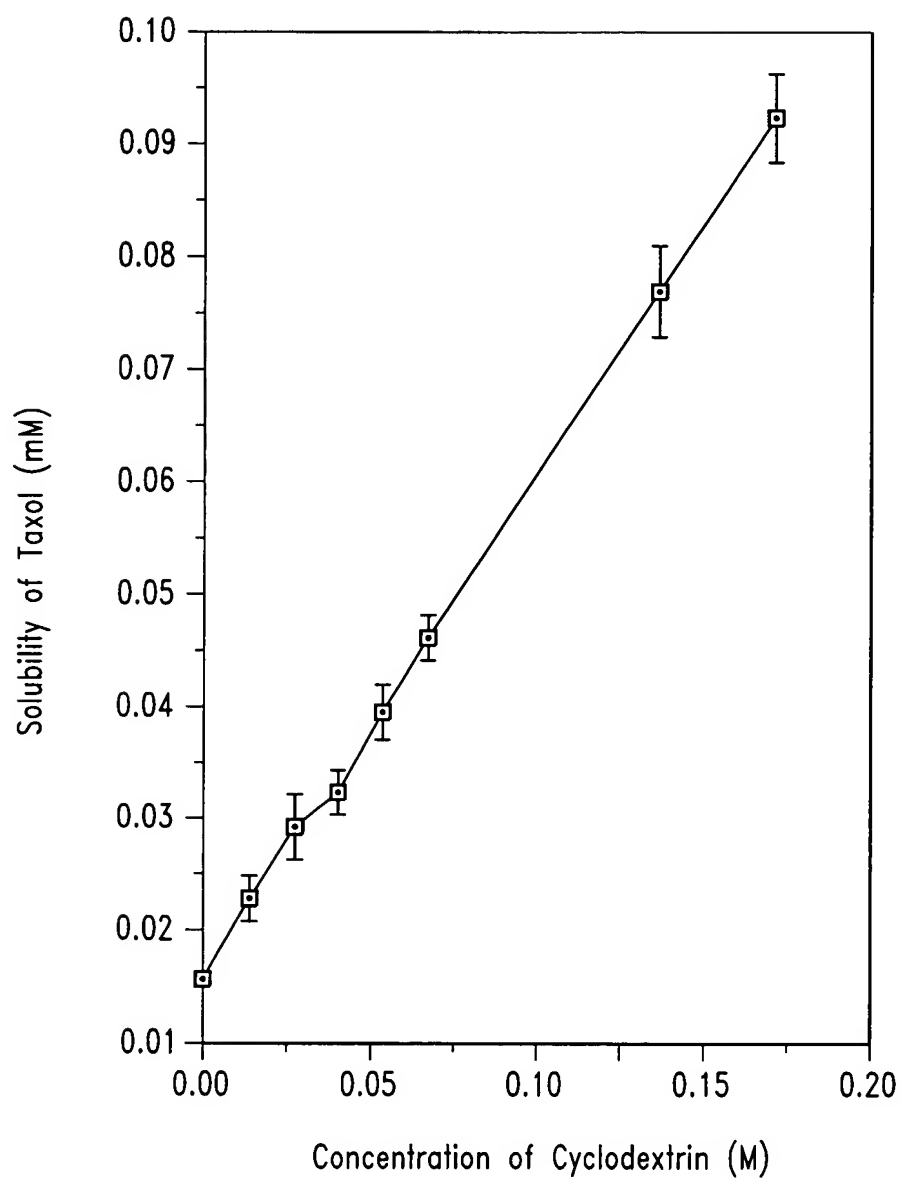


Fig. 49

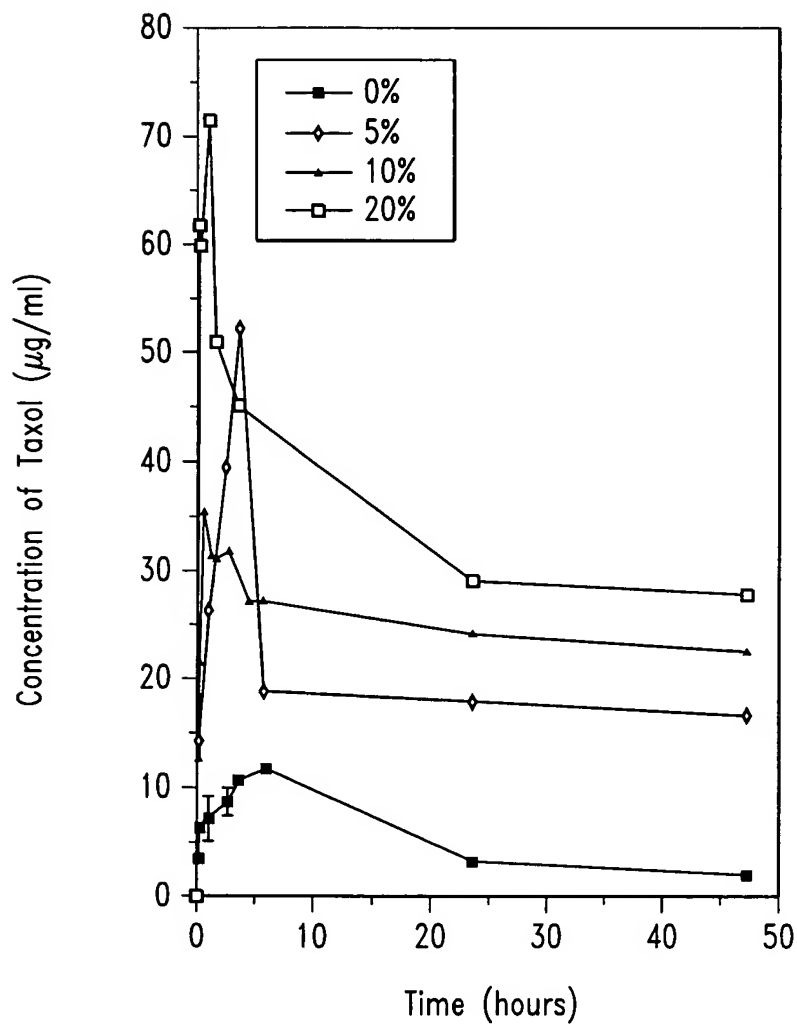


Fig. 50

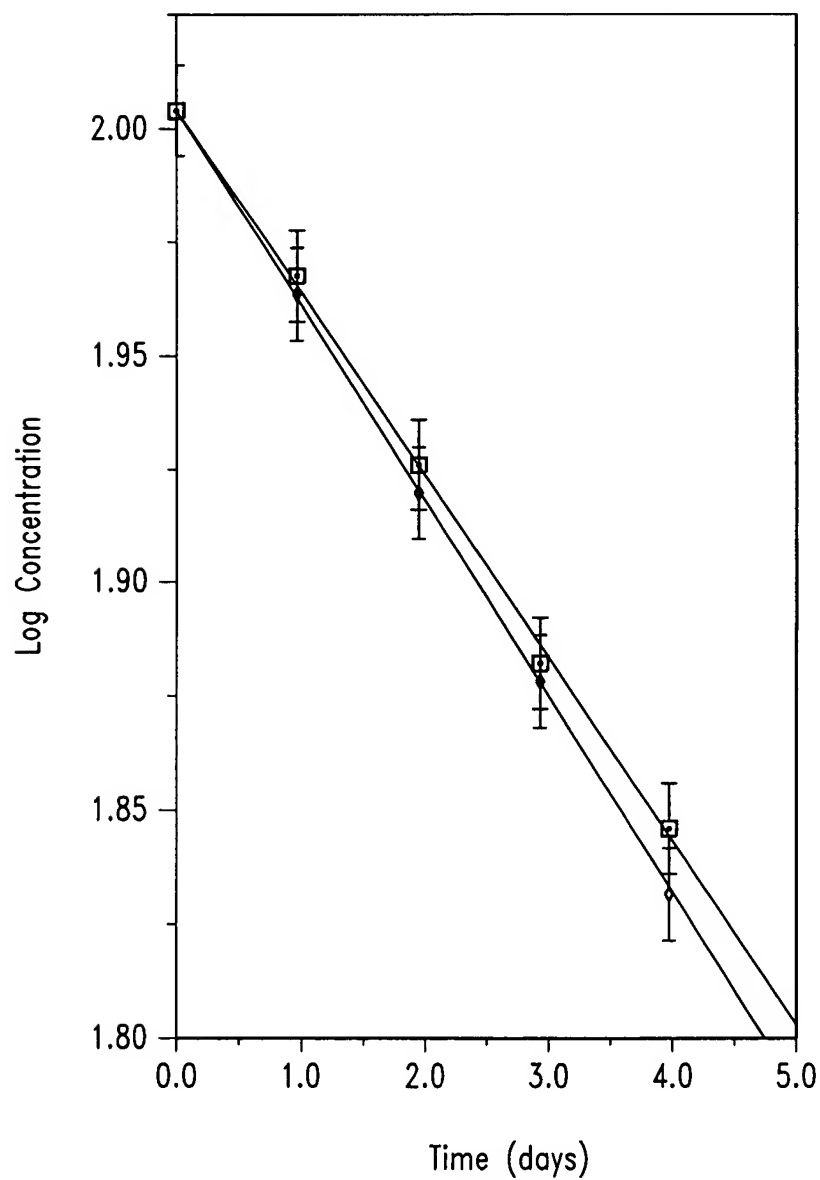


Fig. 51

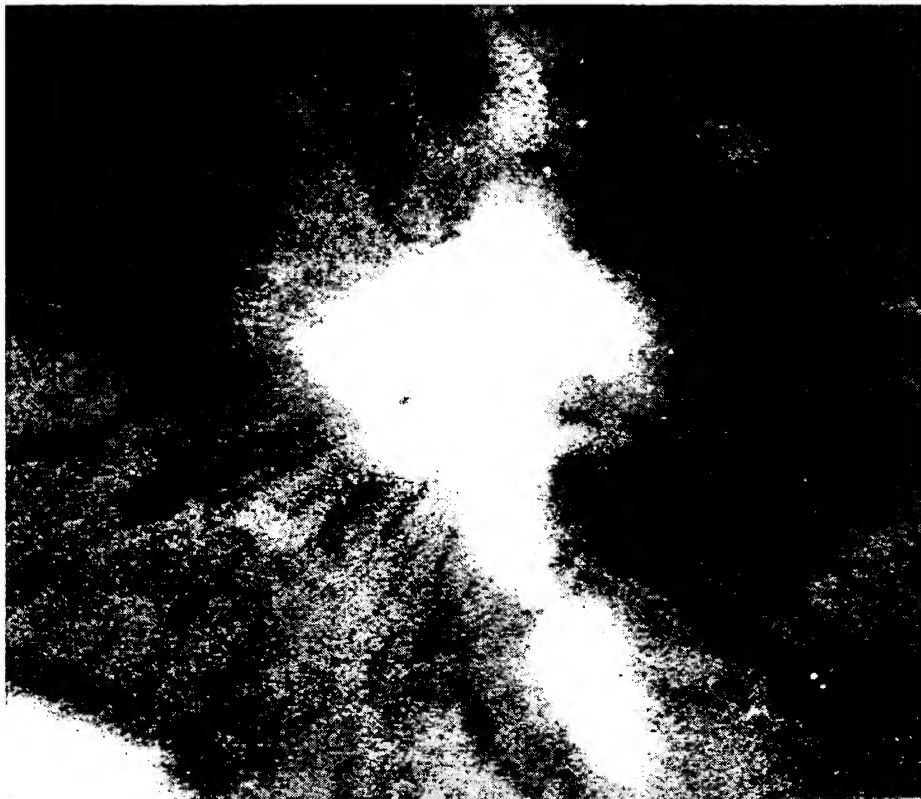


Fig. 51A

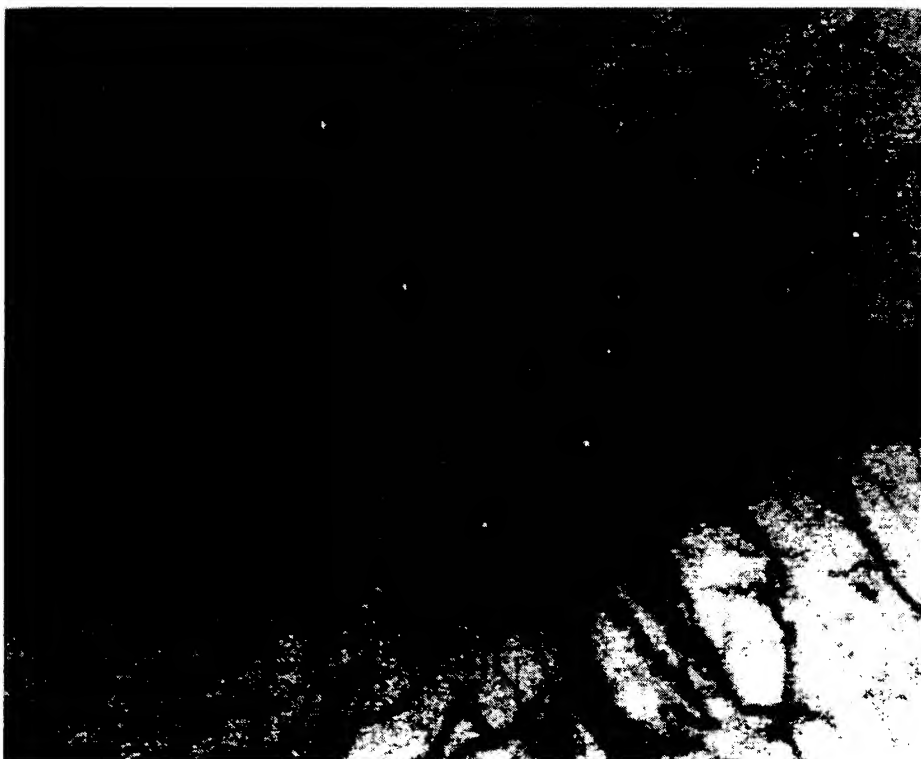


Fig. 51B

Title: COMPOSITIONS AND METHODS FOR TREATING OR PREVENTING DISEASES OF BODY PASSAGEWAYS

Inventor(s): William L. Hunter and Lindsay S. Machan

Express Mail No. EV348170571US

Docket No. 110129.405C3

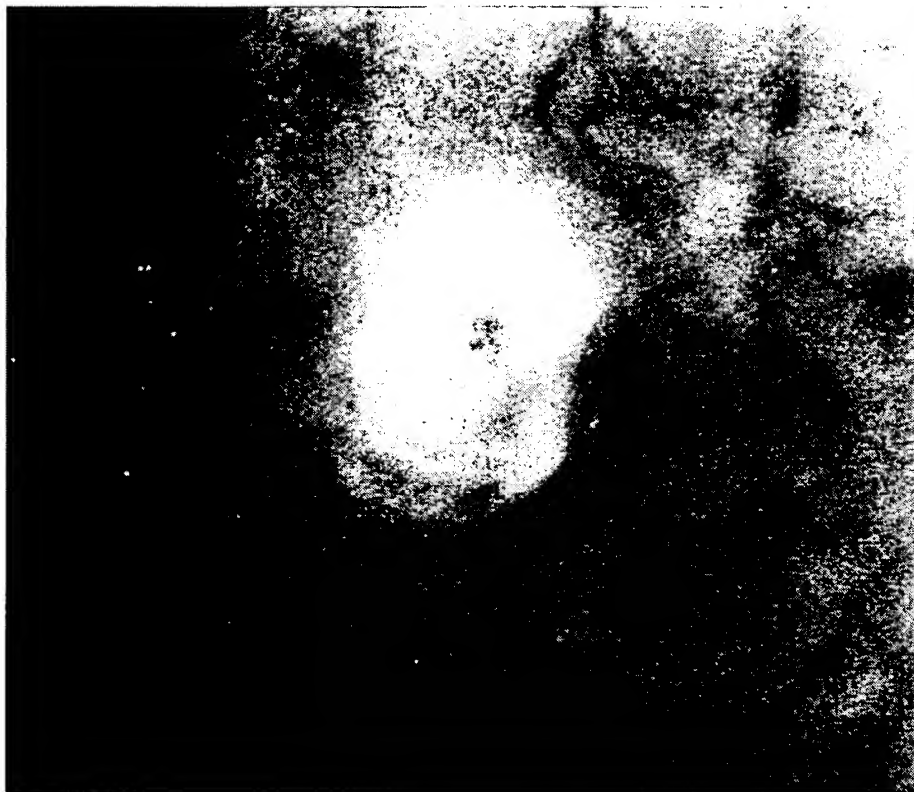


Fig. 51C

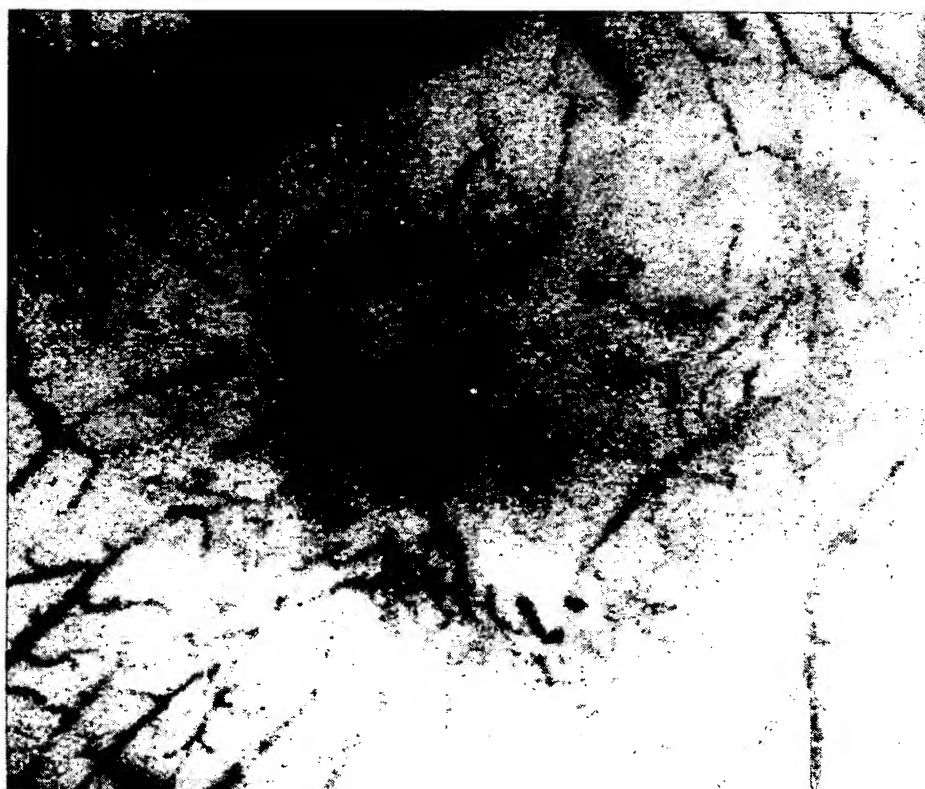


Fig. 51D

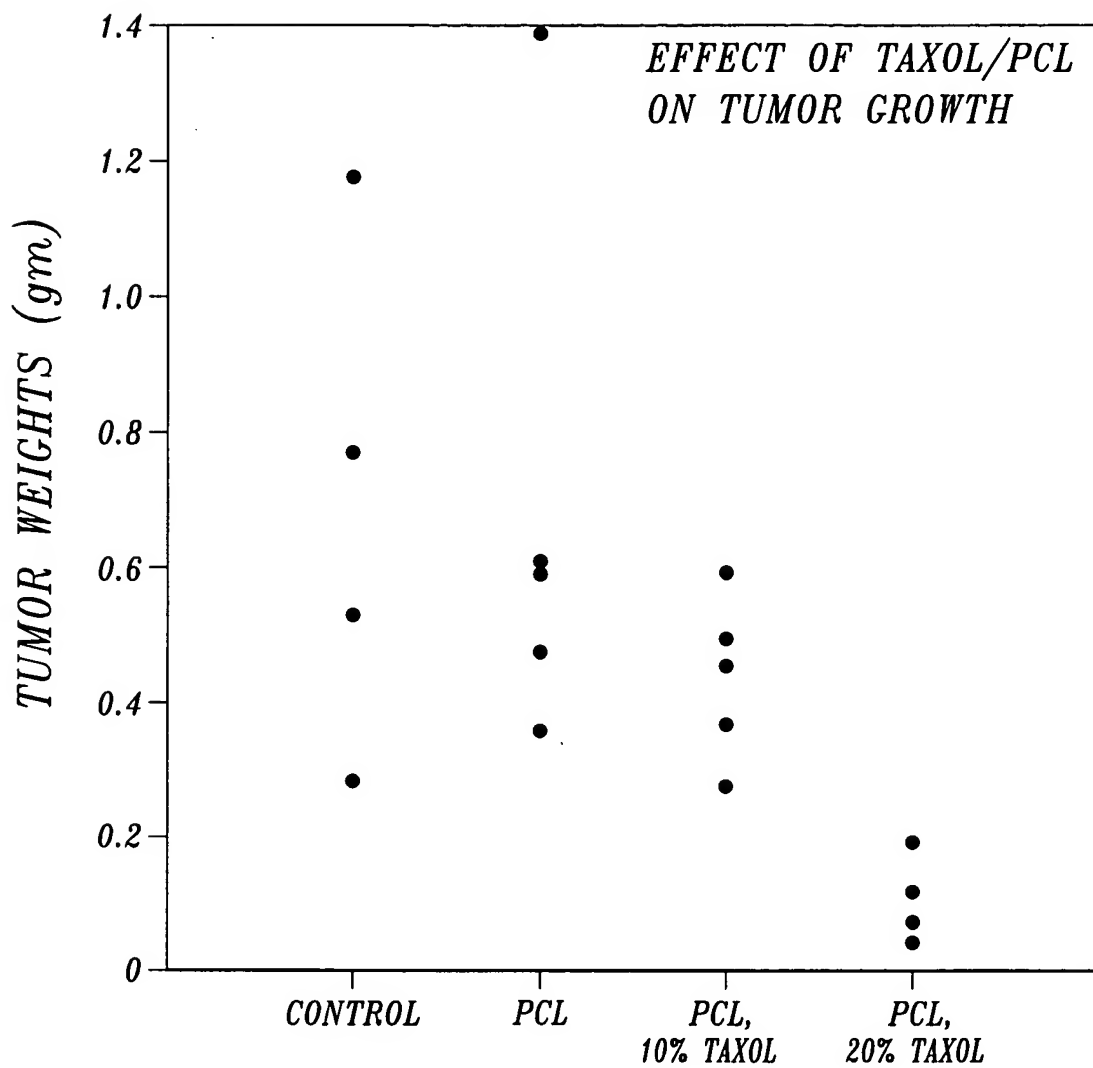
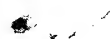


Fig. 52A



Control



20% taxol-paste

cross sections of tumors

Fig. 52B



20% taxol-paste



10% taxol-paste

cross sections of tumors

Fig. 52C

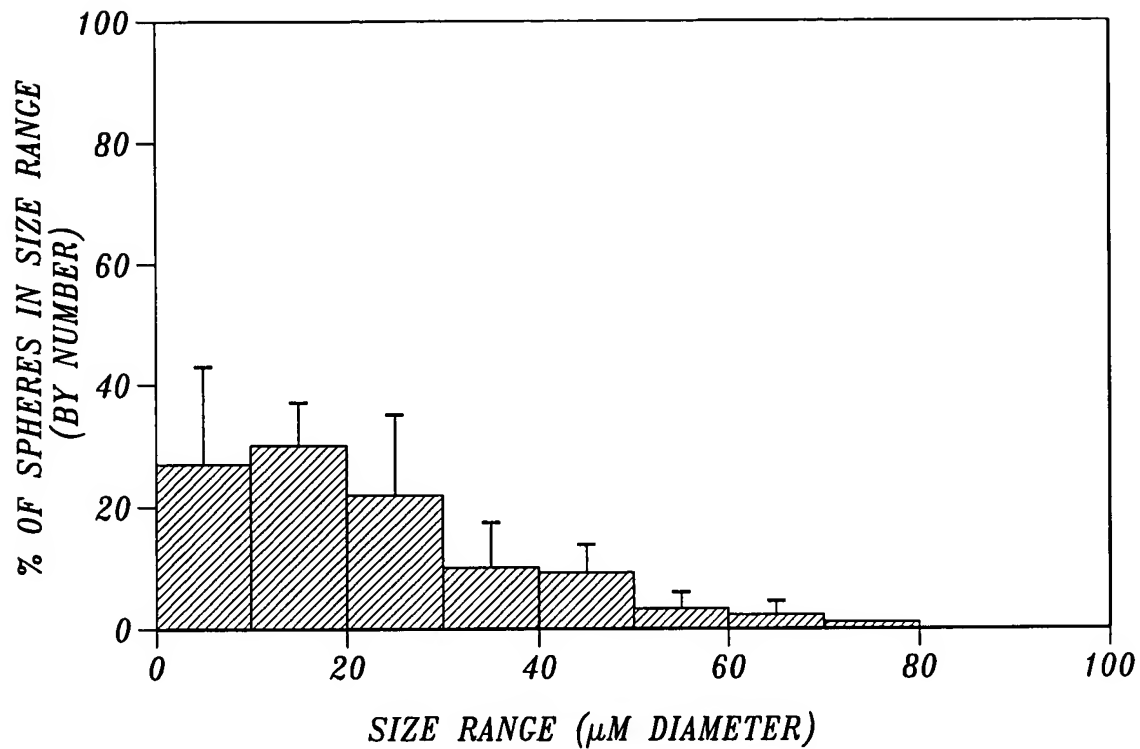


Fig. 53

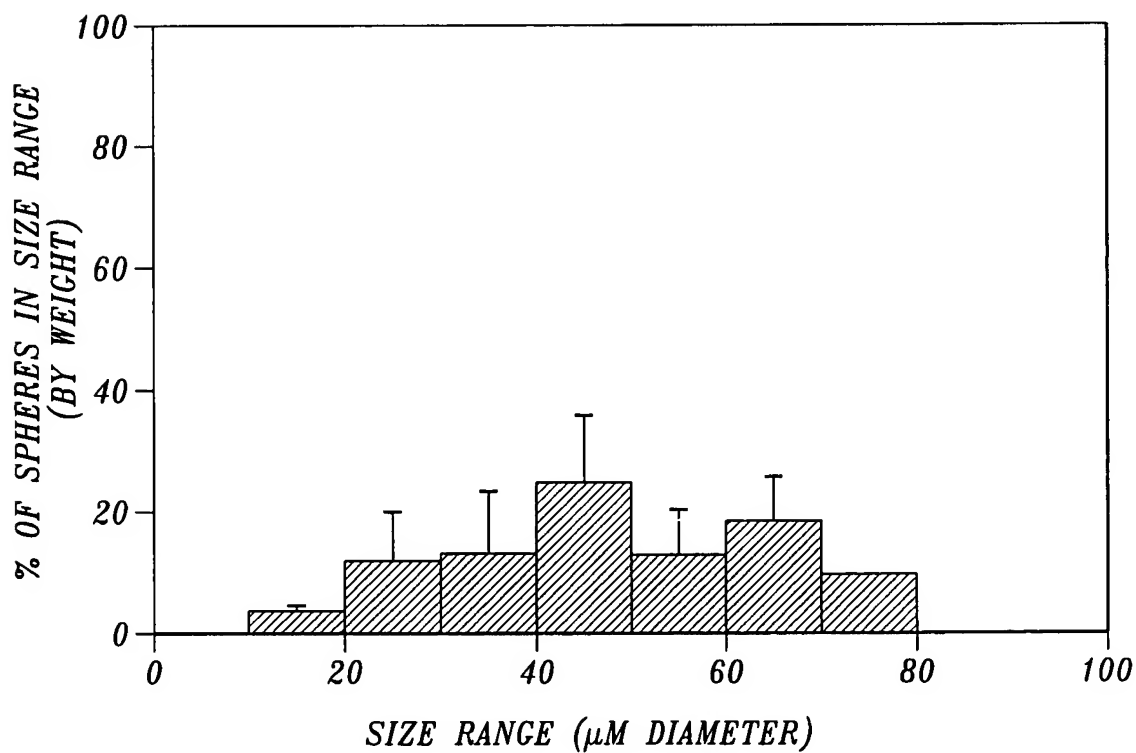


Fig. 54

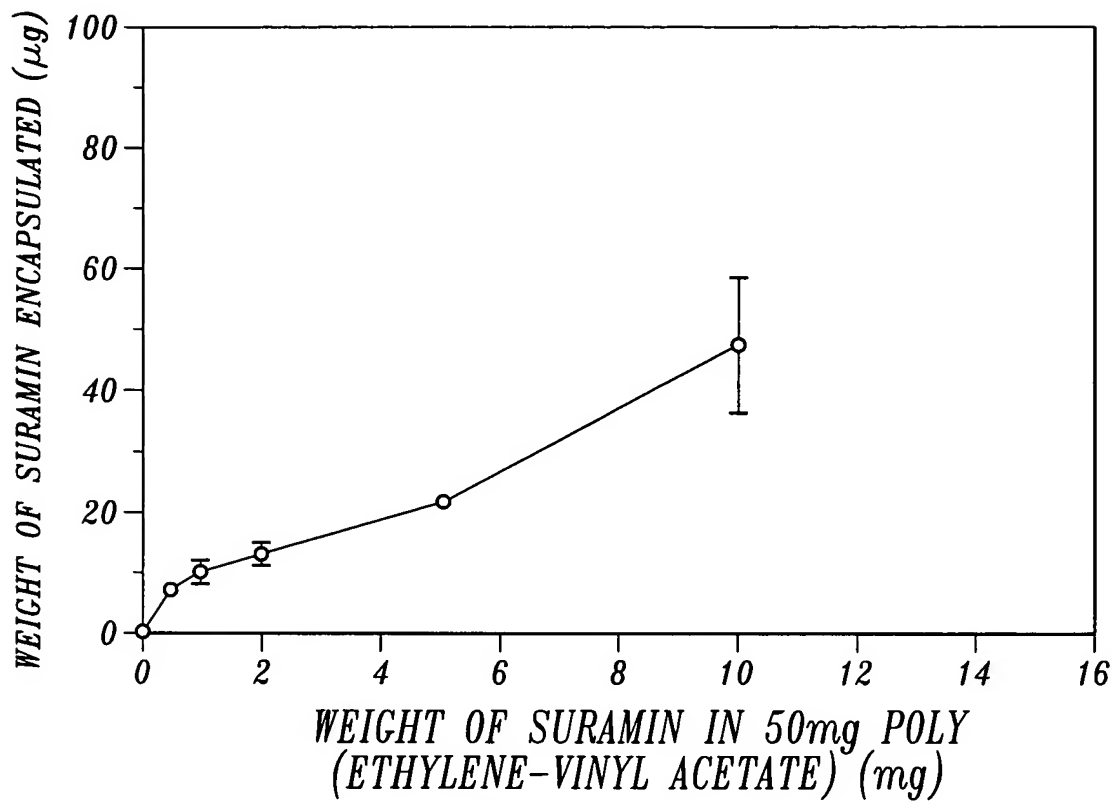


Fig. 55

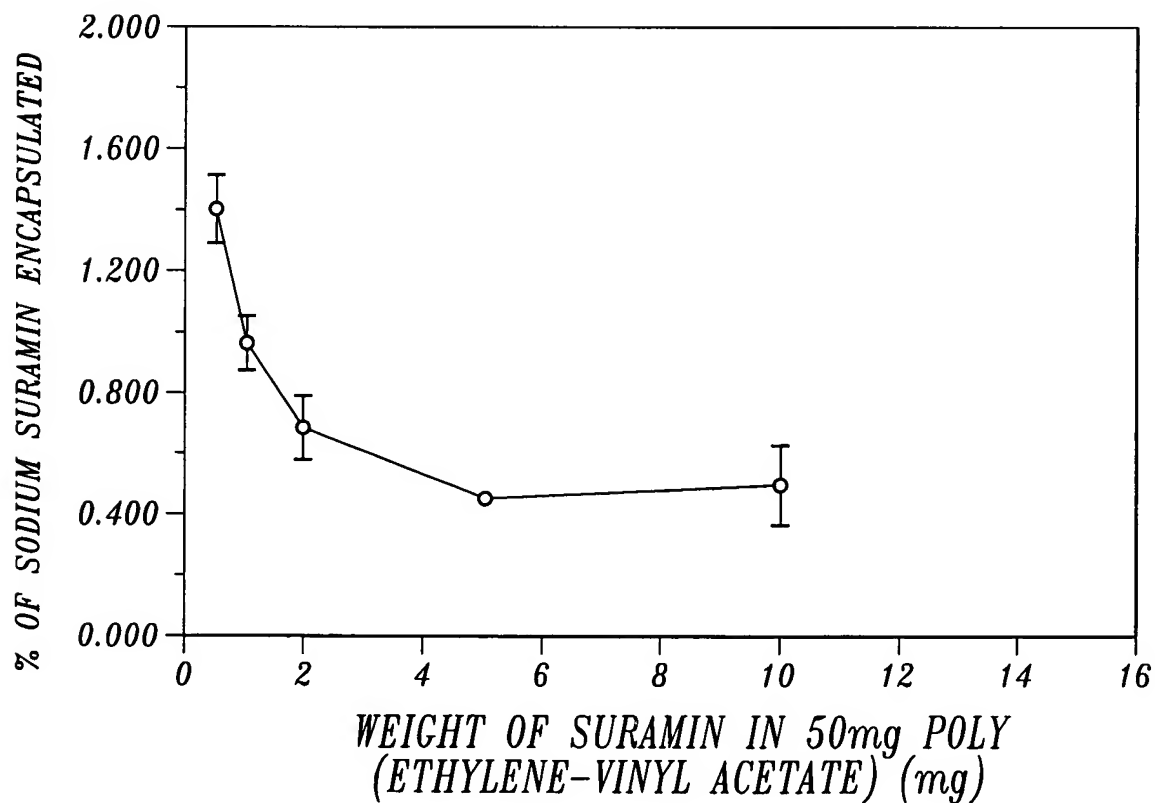


Fig. 56

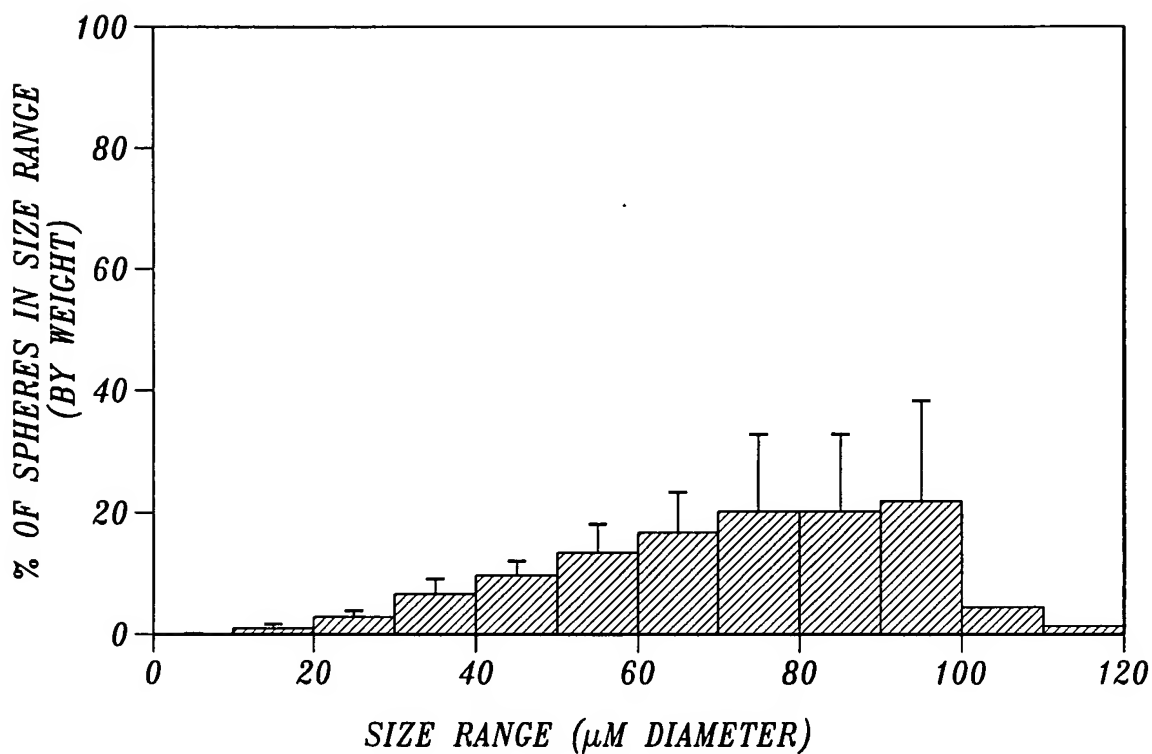


Fig. 57

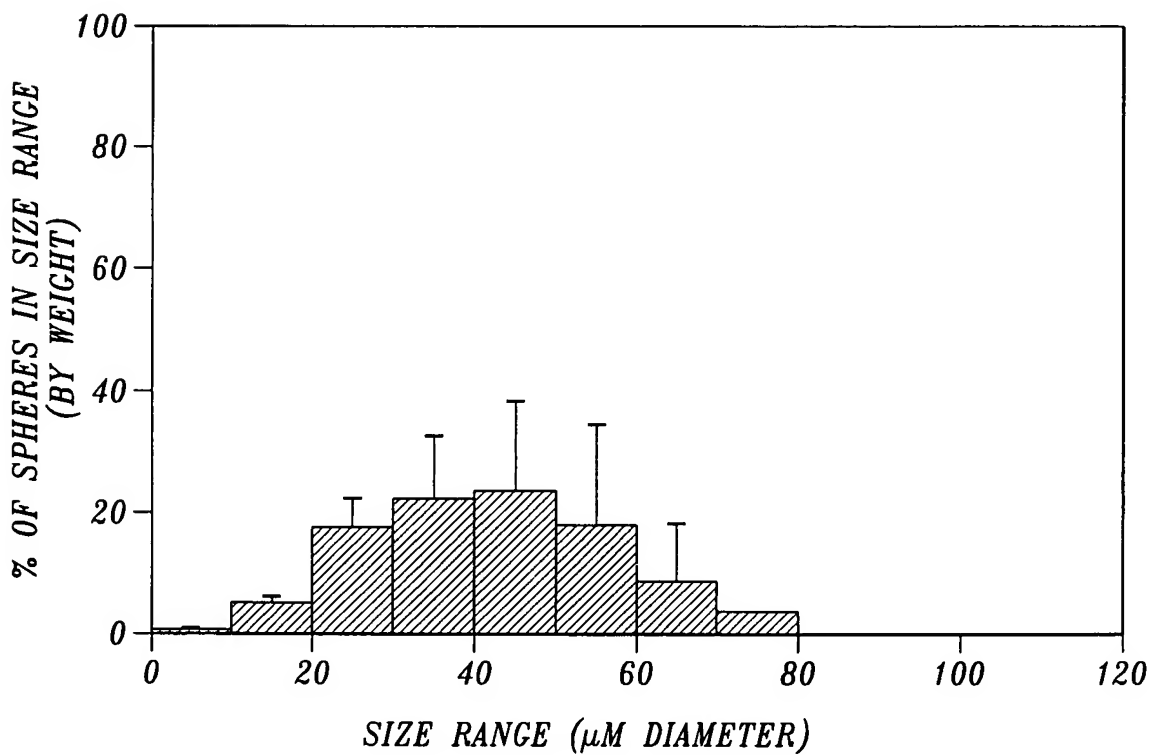


Fig. 58

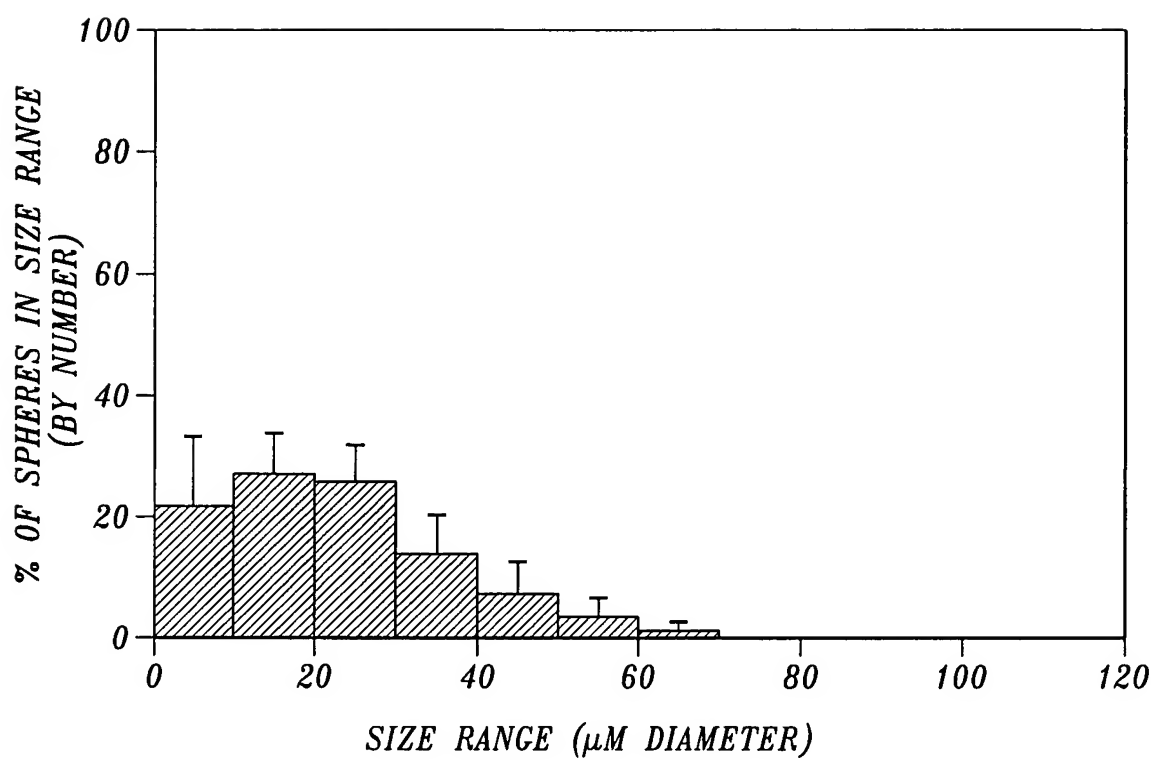


Fig. 59



Fig. 60A

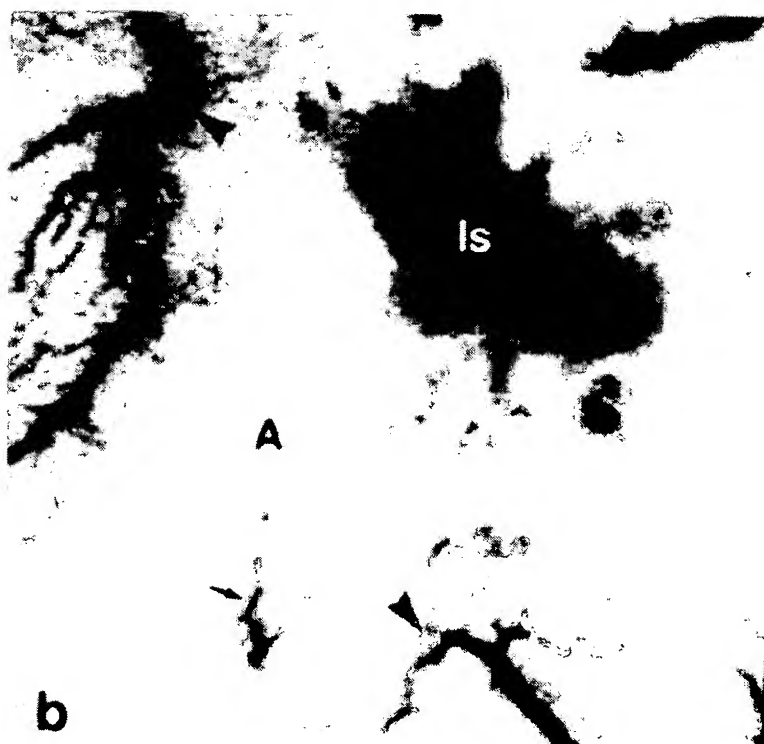


Fig. 60B

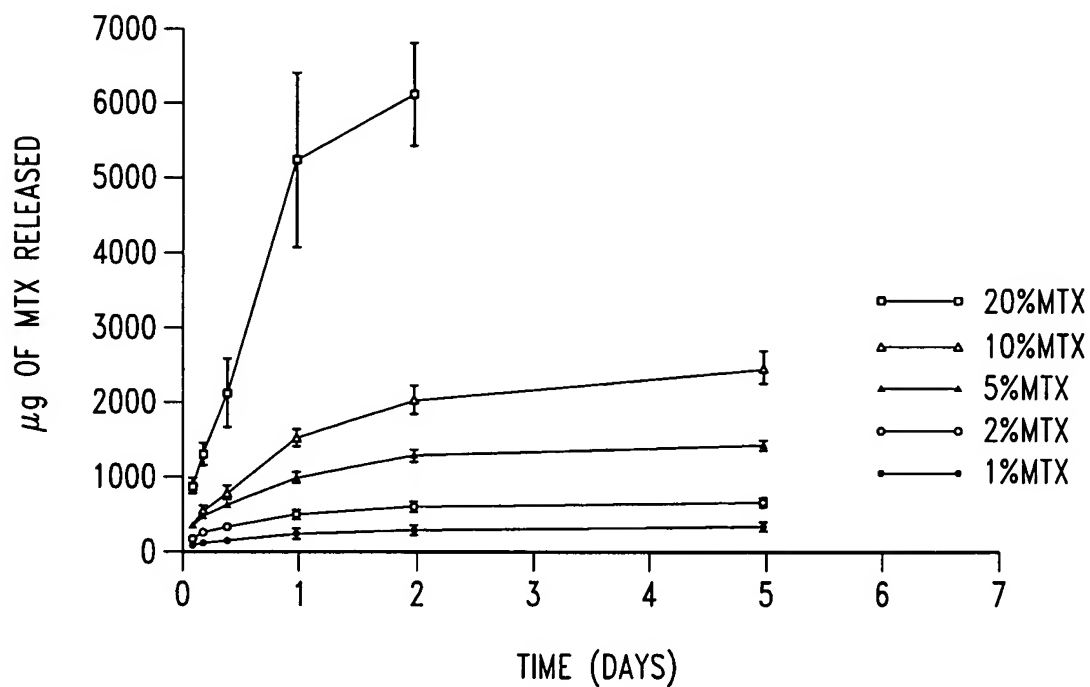


Fig. 61A

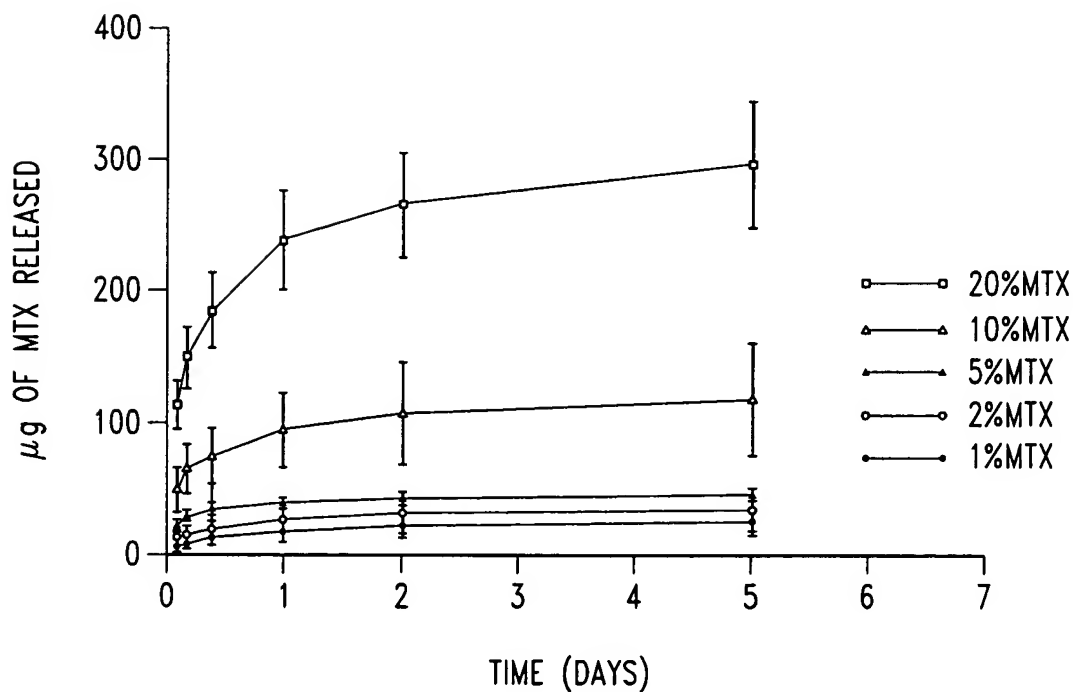


Fig. 61B

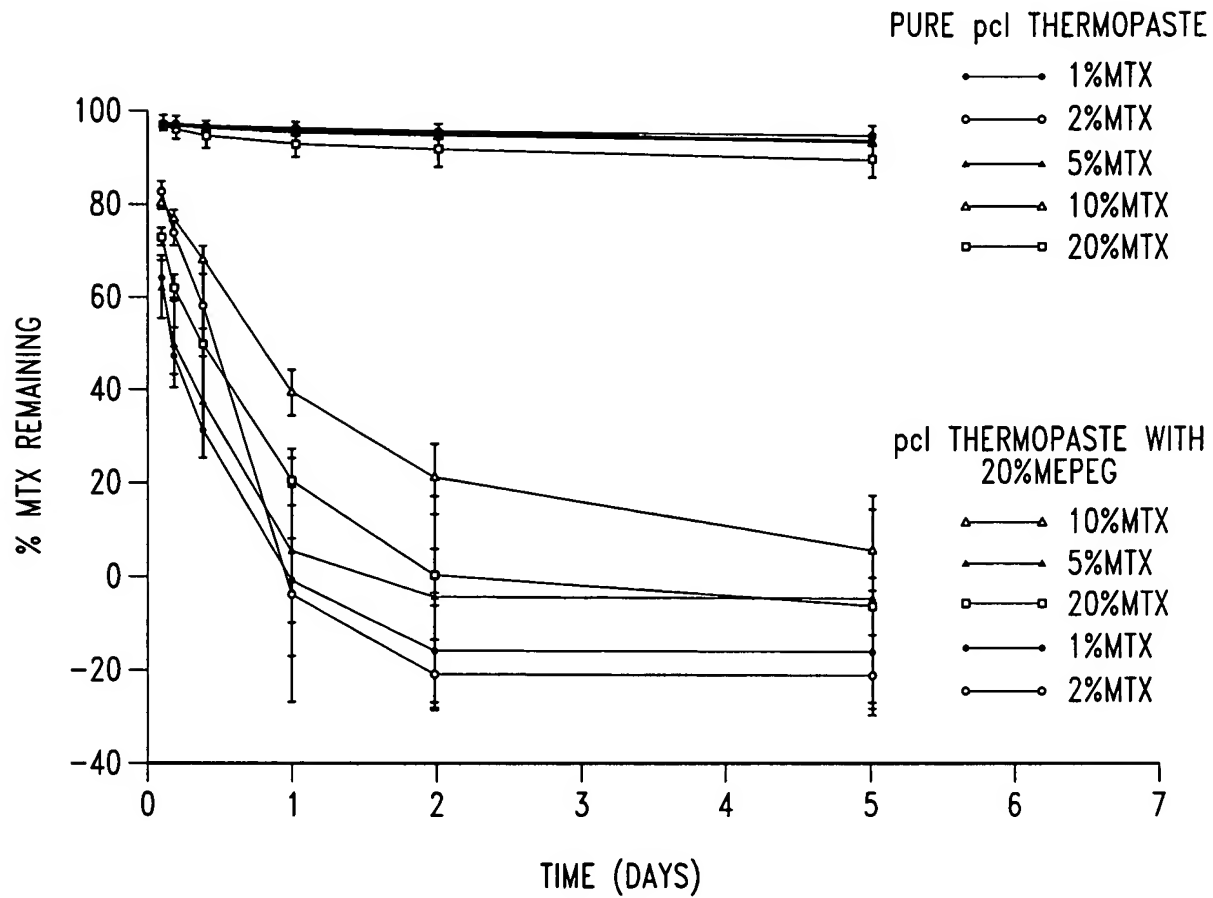


Fig. 61C

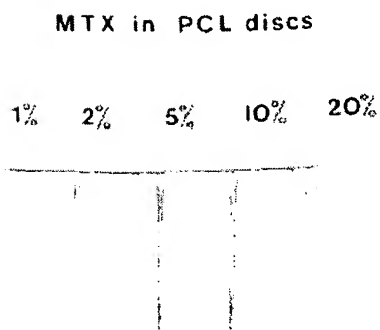


Fig. 61D

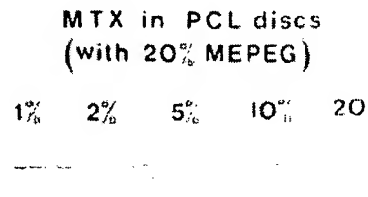


Fig. 61E

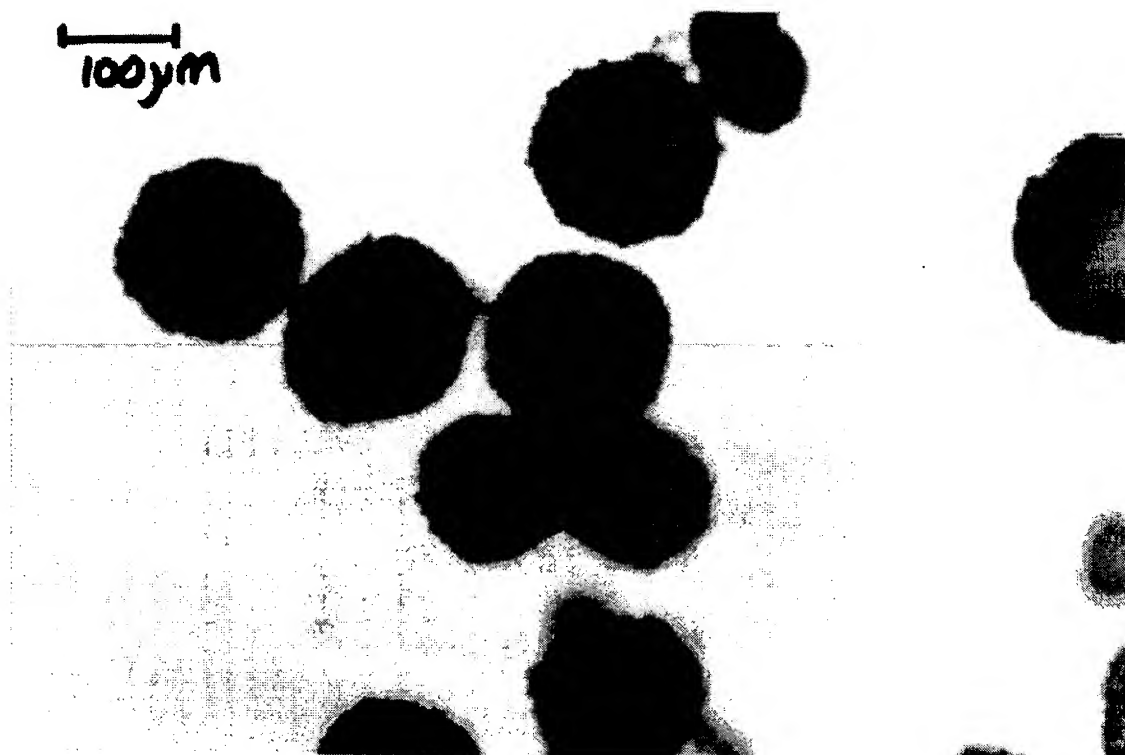


Fig. 62

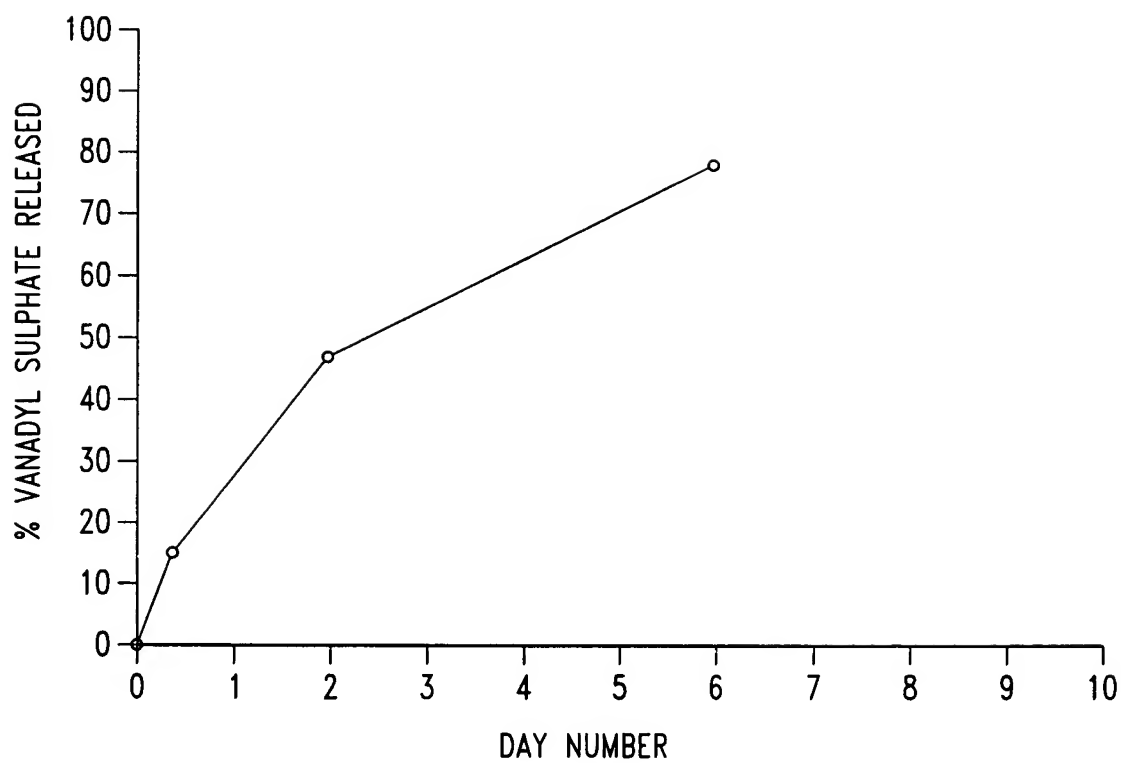


Fig. 63

Title: COMPOSITIONS AND METHODS FOR TREATING OR PREVENTING DISEASES OF BODY PASSAGEWAYS

Inventor(s): William L. Hunter and Lindsay S. Machan

Express Mail No. EV348170571US

Docket No. 110129.405C3

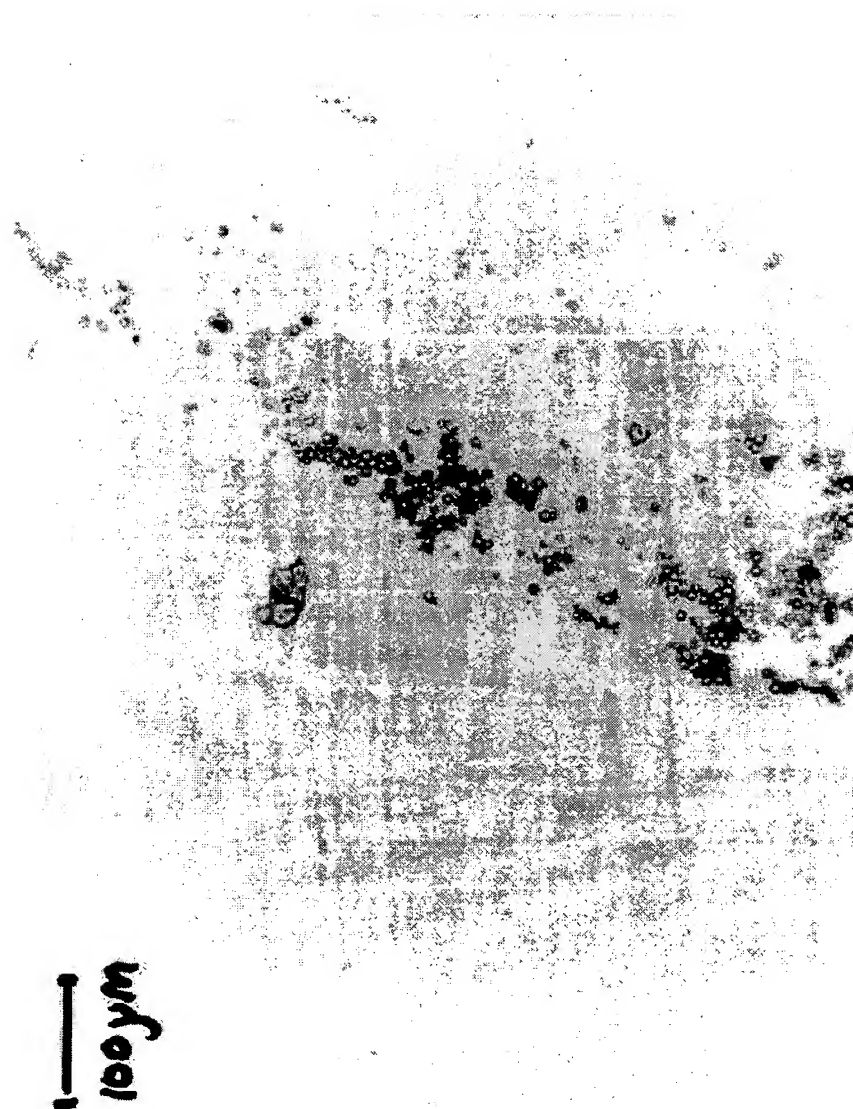


Fig. 64

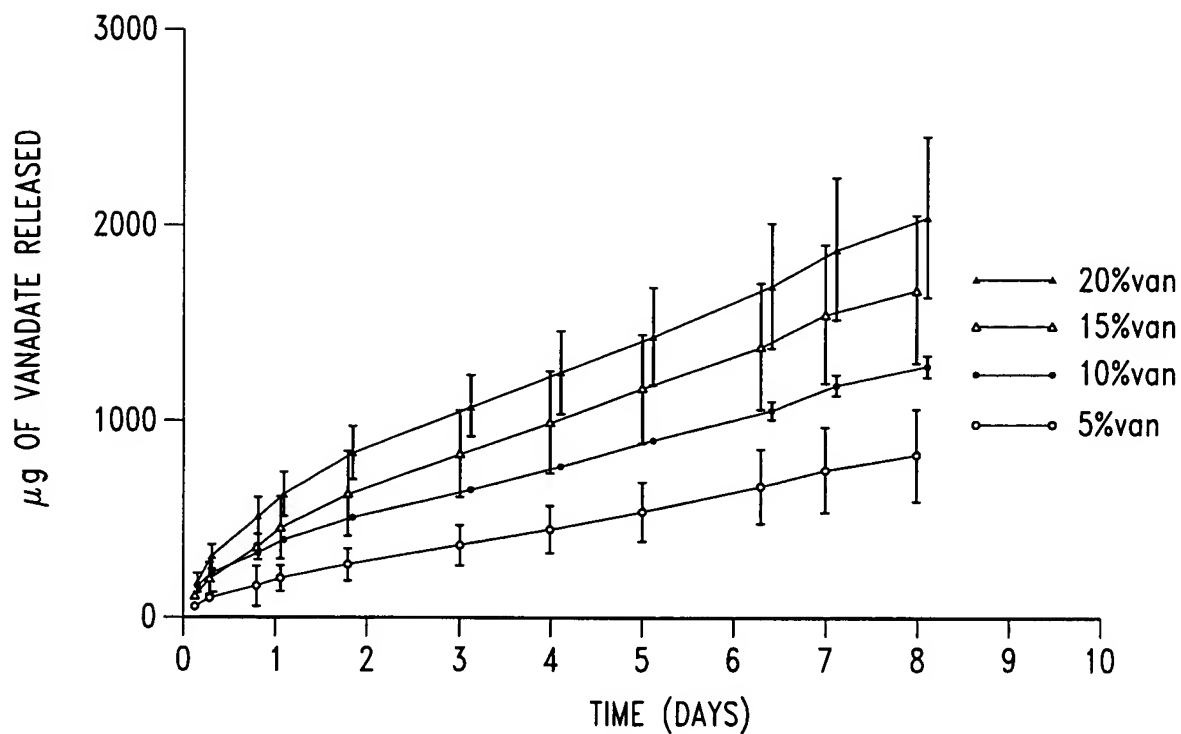


Fig. 65A

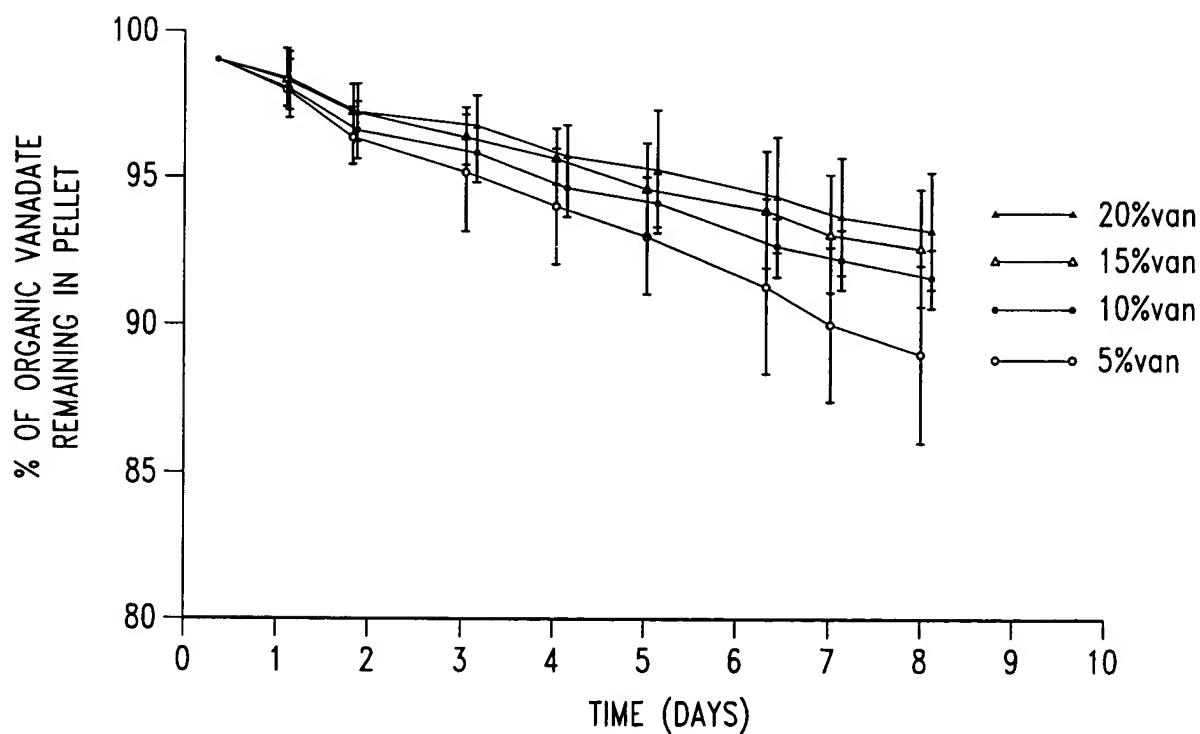


Fig. 65B

Title: COMPOSITIONS AND METHODS FOR TREATING OR PREVENTING DISEASES OF BODY PASSAGEWAYS

Inventor(s): William L. Hunter and Lindsay S. Machan

Express Mail No. EV348170571US

Docket No. 110129.405C3

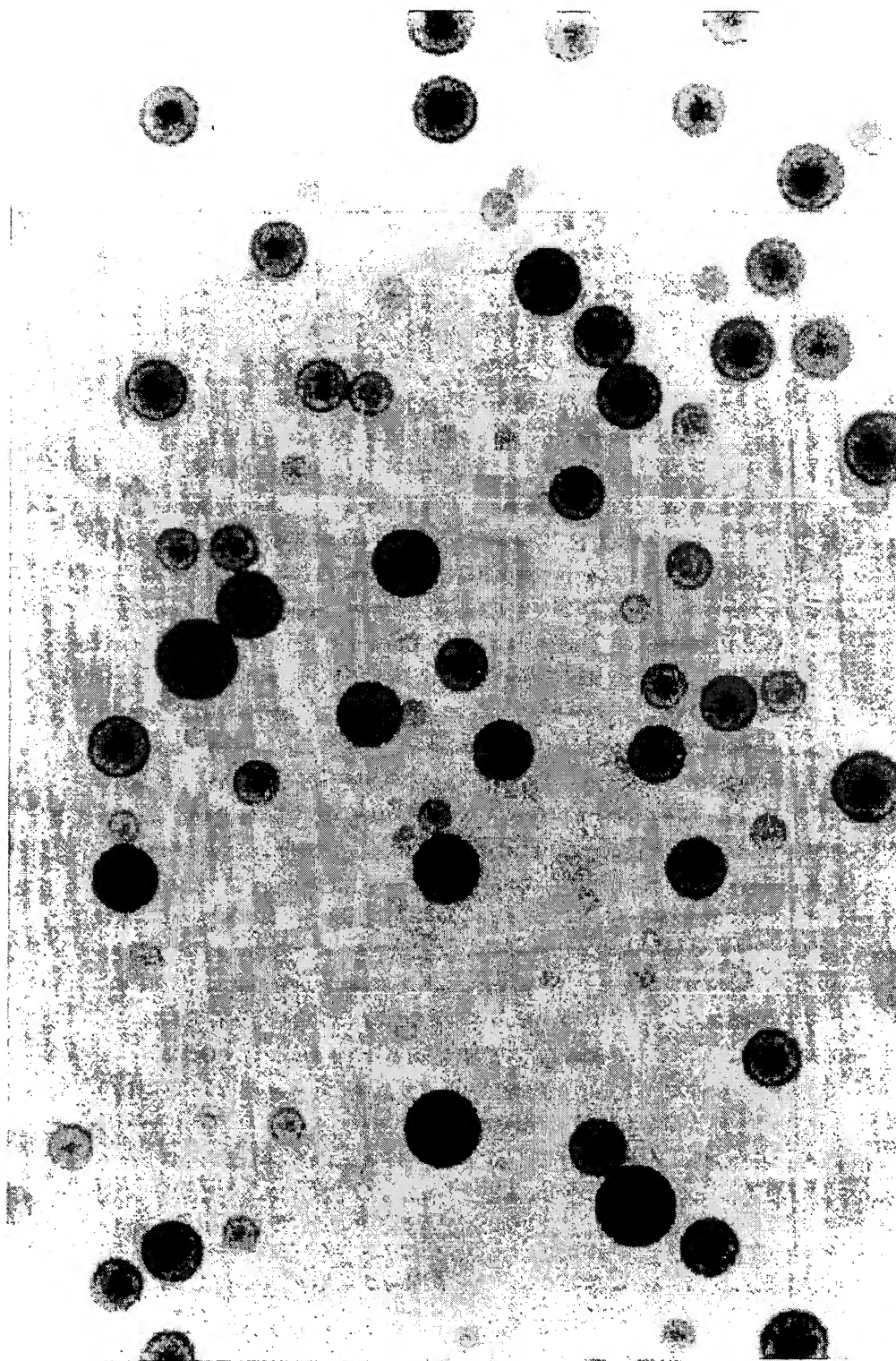


Fig. 66

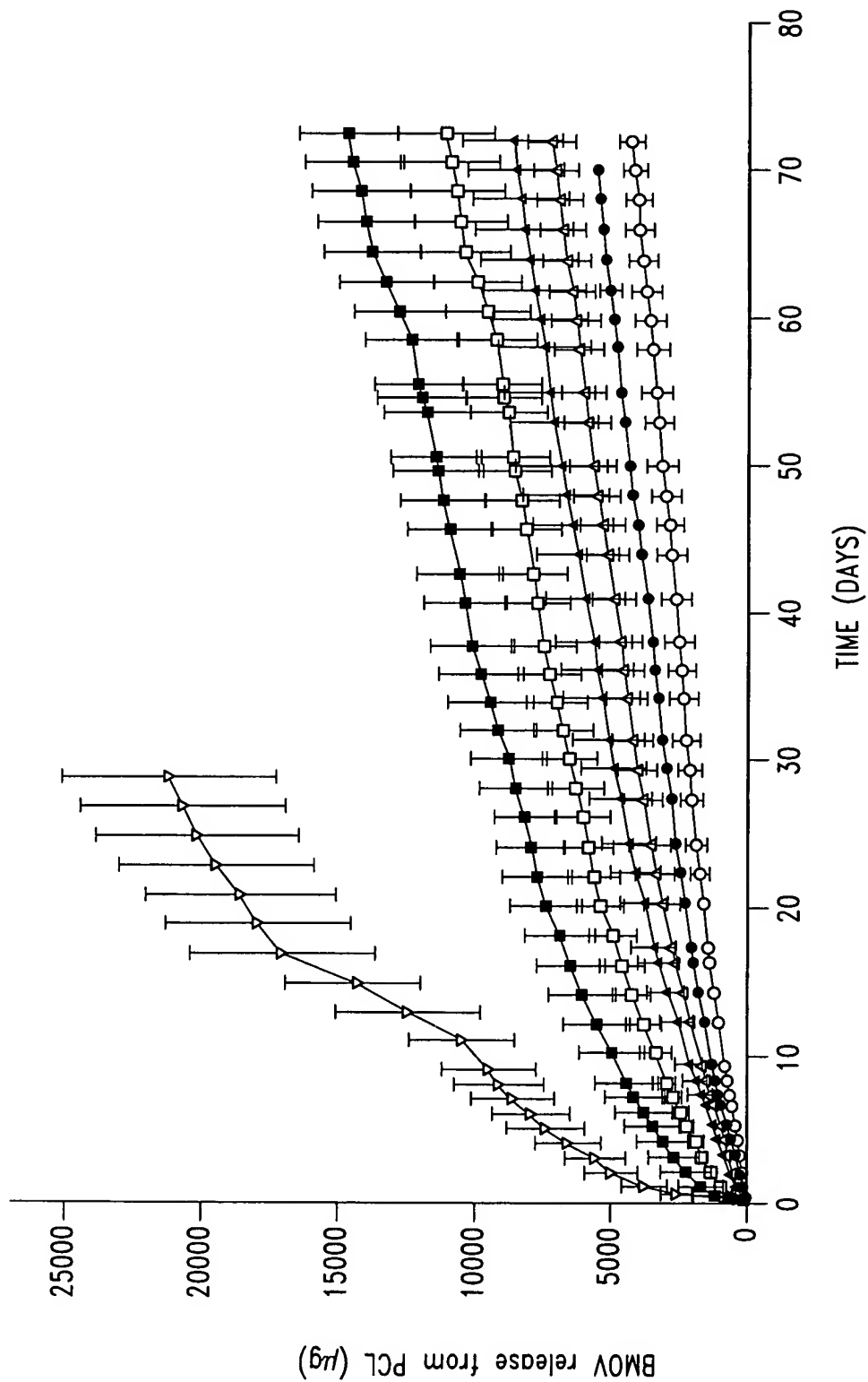


Fig. 67A

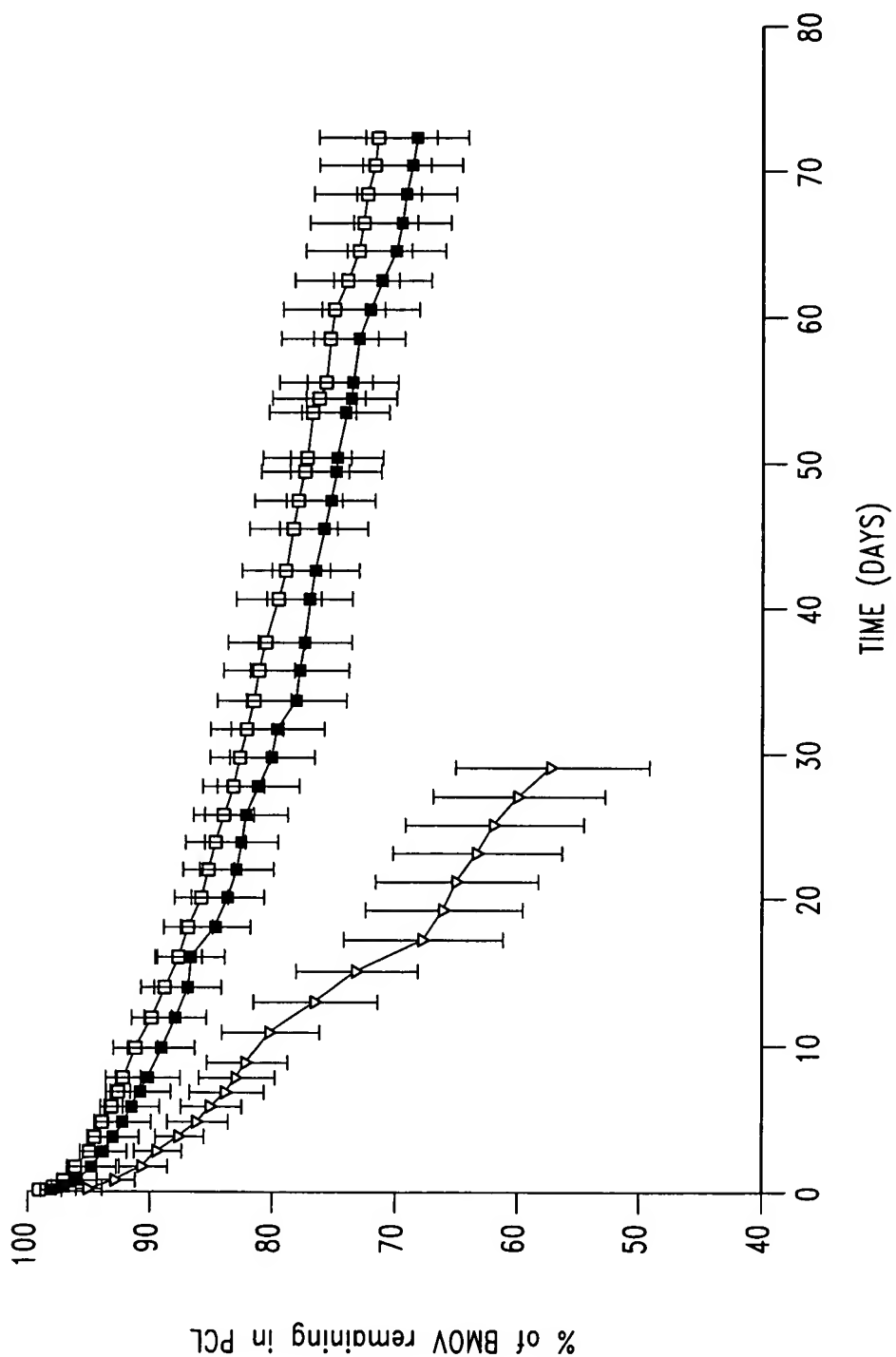


Fig. 67B

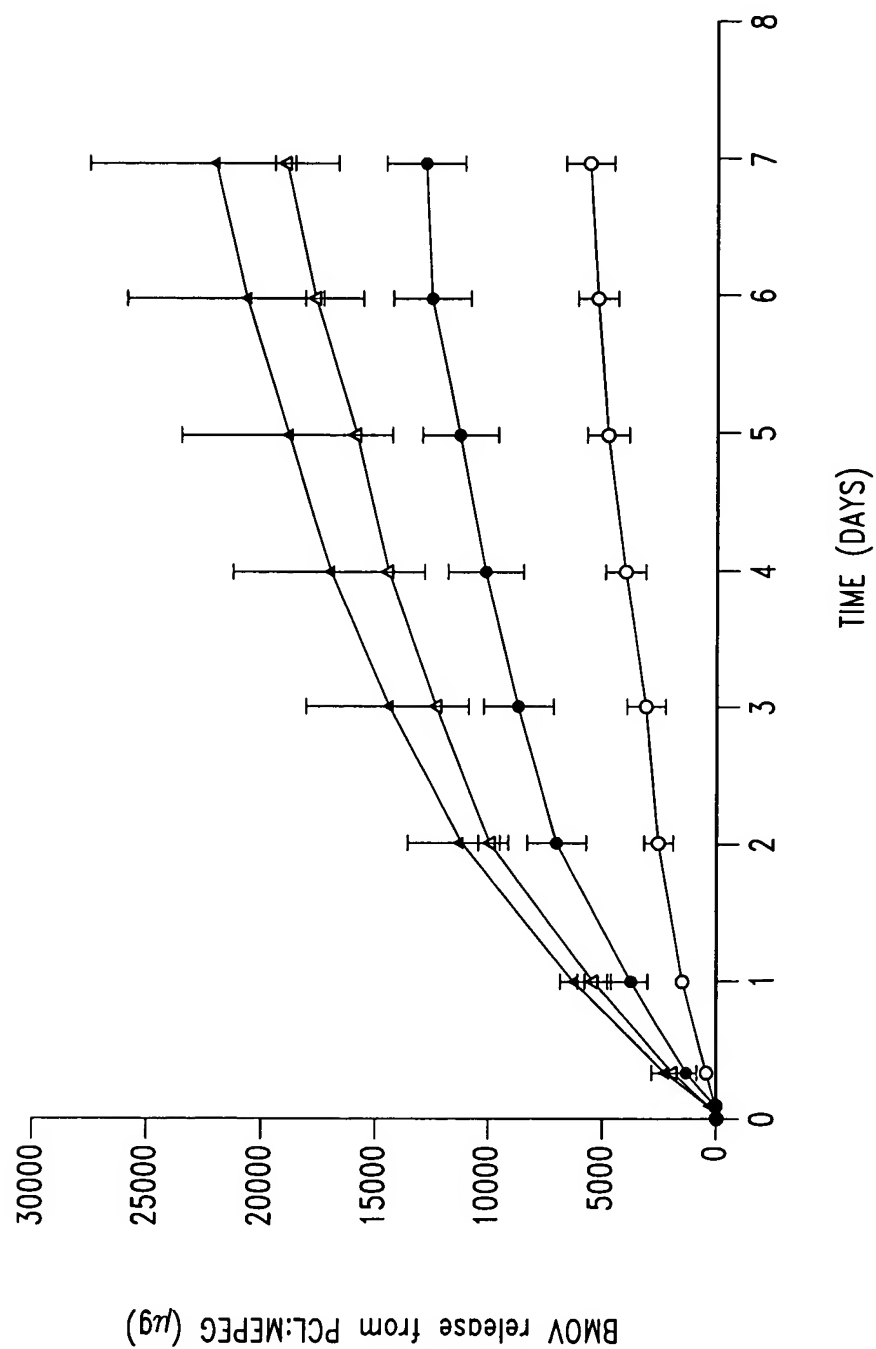


Fig. 68A

Title: COMPOSITIONS AND METHODS FOR TREATING OR PREVENTING DISEASES OF BODY PASSAGEWAYS

Inventor(s): William L. Hunter and Lindsay S. Machan

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Docket No. 110129.405C3

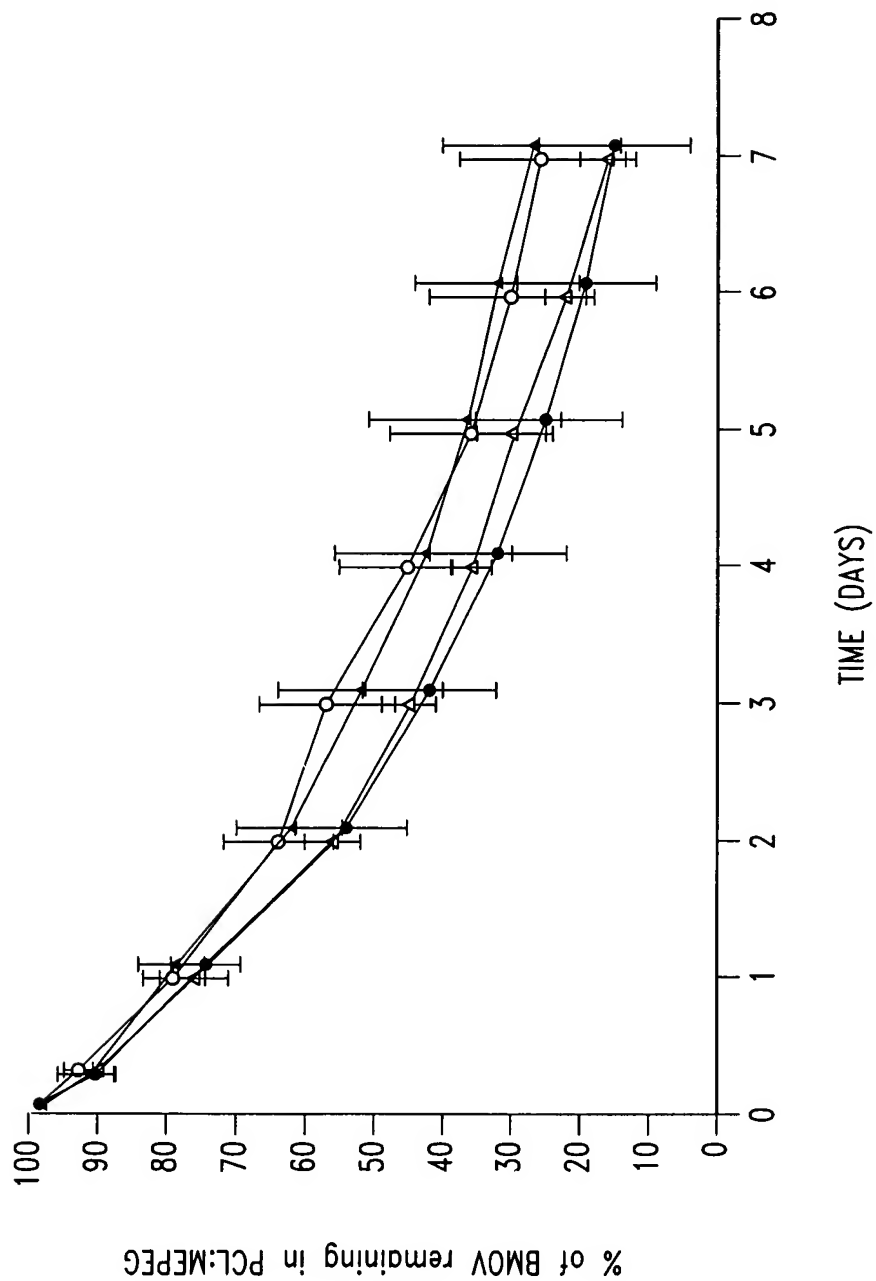


Fig. 68B

Title: COMPOSITIONS AND METHODS FOR TREATING OR PREVENTING DISEASES OF BODY PASSAGEWAYS

Inventor(s): William L. Hunter and Lindsay S. Machan

Express Mail No. EV348170571US

Docket No. 110129.405C3

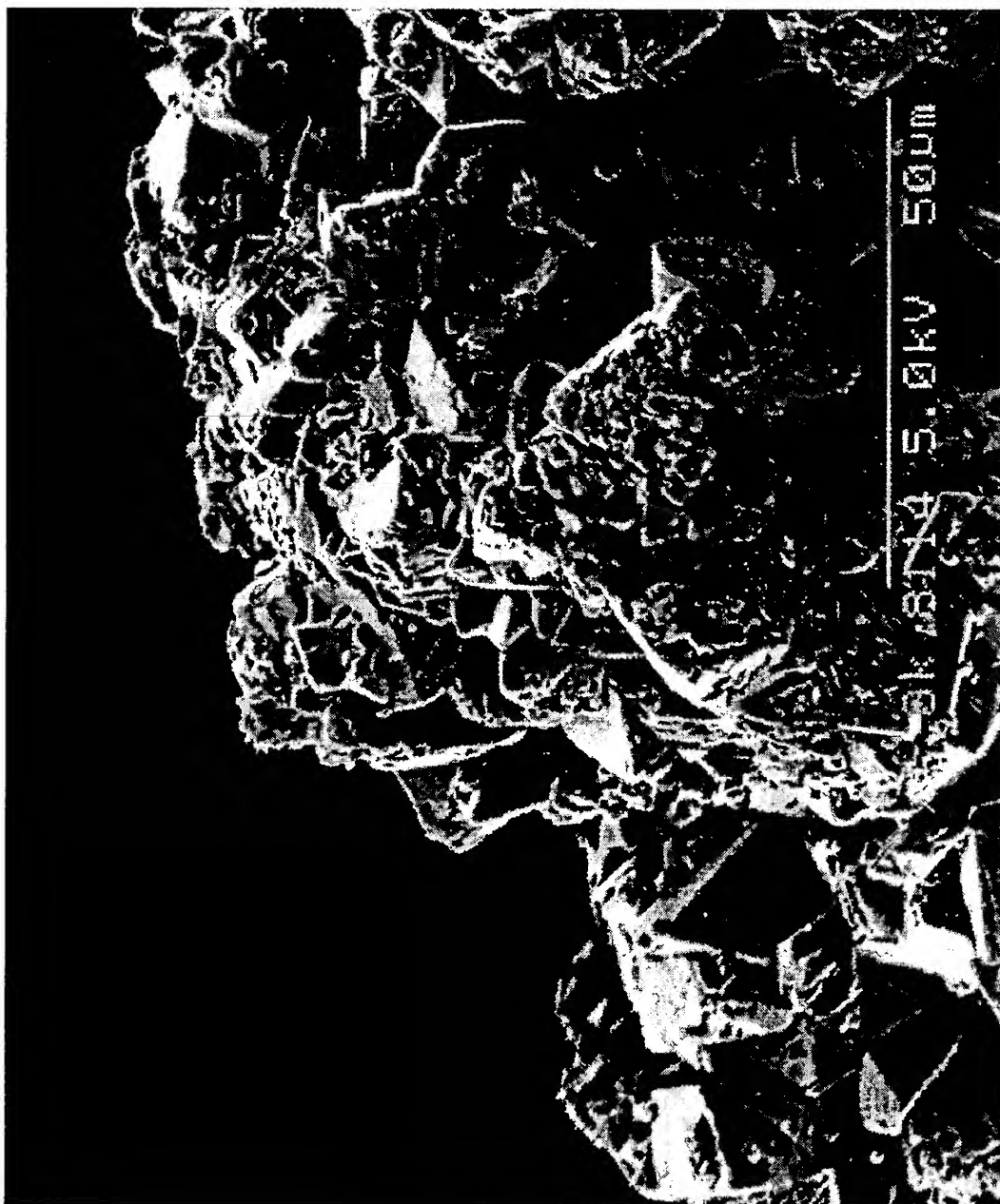


Fig. 69A

Title: COMPOSITIONS AND METHODS FOR TREATING OR PREVENTING DISEASES OF BODY PASSAGEWAYS

Inventor(s): William L. Hunter and Lindsay S. Machan

Express Mail No. EV348170571US

Docket No. 110129.405C3



Fig. 69B

Title: COMPOSITIONS AND METHODS FOR TREATING OR PREVENTING DISEASES OF BODY PASSAGEWAYS

Inventor(s): William L. Hunter and Lindsay S. Machan

Express Mail No. EV348170571US

Docket No. 110129.405C3



Fig. 69C

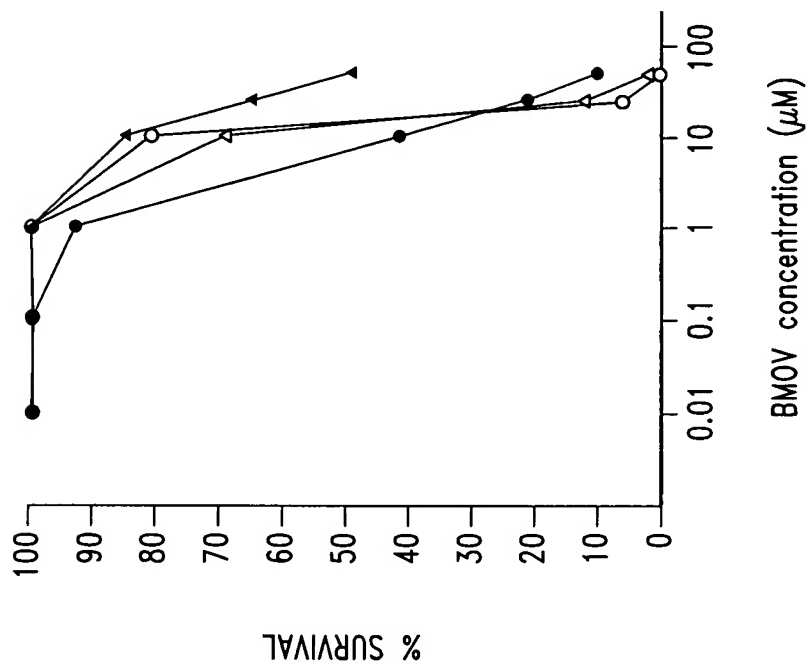


Fig. 70A

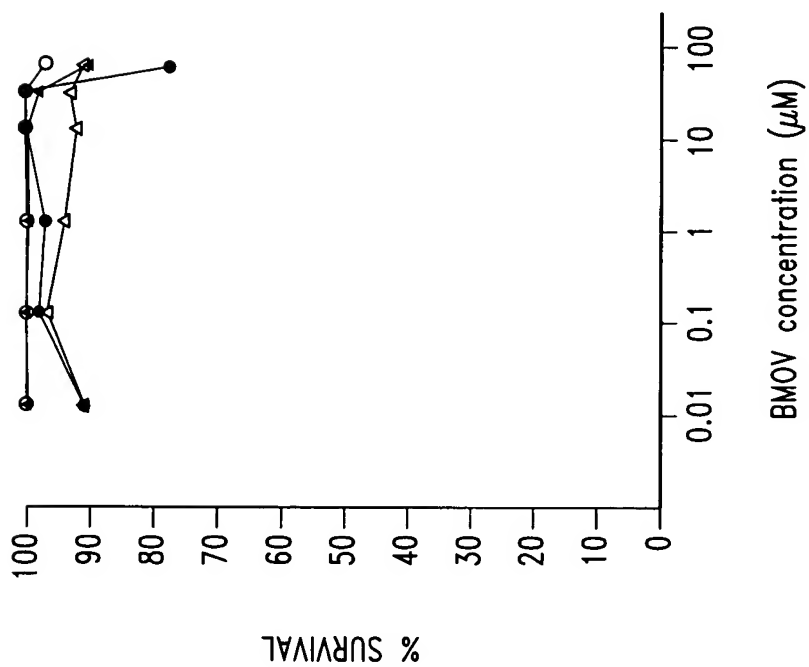


Fig. 70B

1. Effect of BMOV loaded paste on the weights of MDAY-D2 tumours grown in mice.

| Tumor Weights (g) | | | | |
|-------------------|---------|----------|----------|----------|
| | Control | 25% BMOV | 30% BMOV | 35% BMOV |
| | 1.68 | 1.05 | -- | -- |
| | 1.01 | 0.48 | -- | -- |
| | 0.96 | 0.20 | -- | -- |
| | 0.91 | 0.14 | -- | -- |
| | 1.23 | 0.80 | -- | -- |
| mean | 1.16 | 0.53 | -- | -- |
| st dev | 0.32 | 0.39 | -- | -- |
| | 1.15 | -- | 0.02 | 0.36 |
| | 1.12 | -- | 0.17 | 0.50 |
| | 1.04 | -- | 0.13 | 0.15 |
| | 2.05 | -- | 1.40 | 0.69 |
| | 1.02 | -- | 0.37 | 0.16 |
| | 2.25 | -- | 0.20 | 0.00 |
| mean | 1.57 | -- | 0.38 | 0.31 |
| st dev | 0.53 | -- | 0.51 | 0.25 |

Fig. 71

2. Effect of BMOV loaded PCL:MePEG paste on the weights of RIF-1 tumours grown in mice.

| Tumor Weights (g) | | | | |
|-------------------|------------------|--------------|--------------|--------------|
| <u>Animal</u> | <u>Treatment</u> | <u>Day 4</u> | <u>Day 5</u> | <u>Day 6</u> |
| 1 | control | 0.162 | 0.226 | -- |
| 2 | control | 0.131 | 0.146 | 0.114 |
| 3 | control | 0.133 | 0.173 | 0.233 |
| 4 | control | 0.000 | 0.024 | 0.027 |
| 5 | control | 0.122 | 0.148 | 0.161 |
| 6 | control | 0.173 | 0.078 | 0.164 |
| 7-12 | 5% BMOV | 0.000 | 0.000 | 0.000 |

Fig. 72

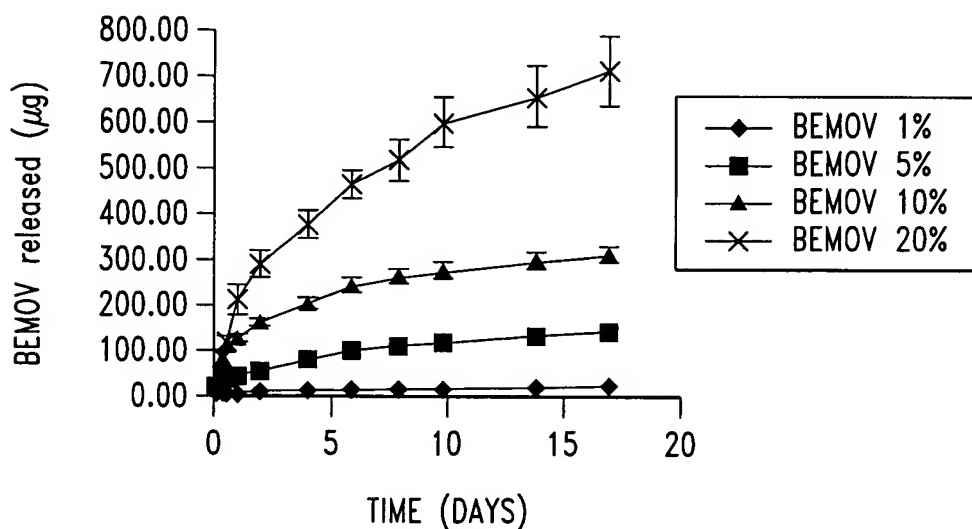


Fig. 73A

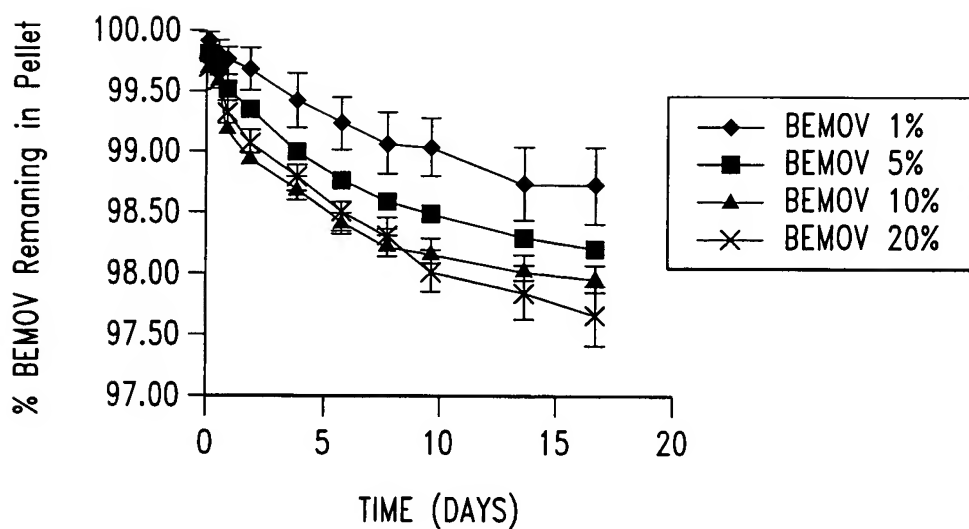


Fig. 73B

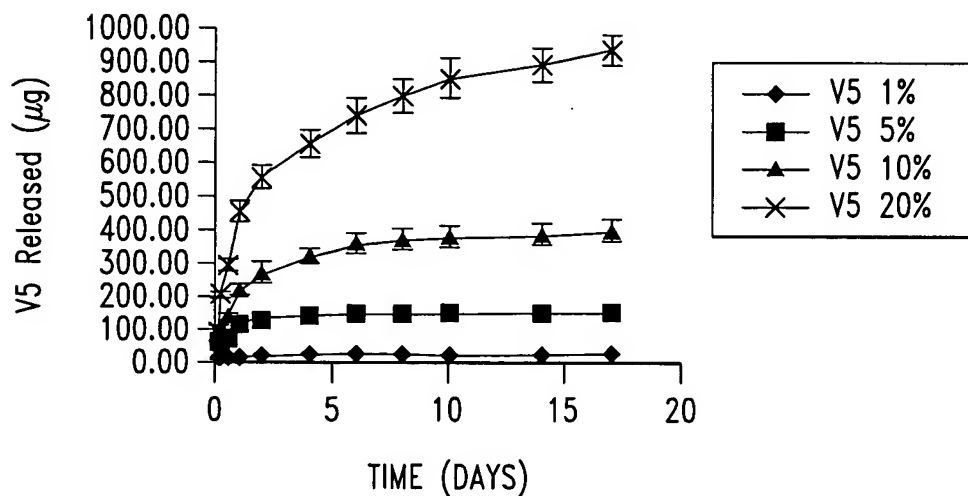


Fig. 74A

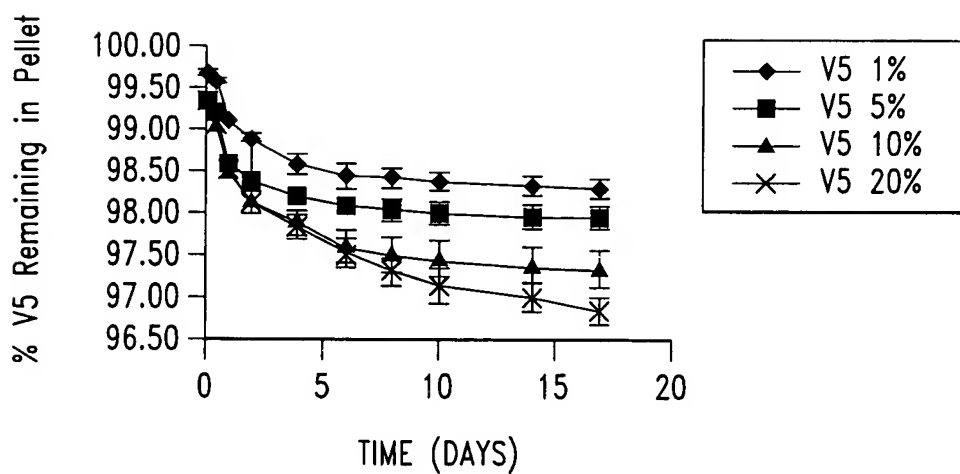


Fig. 74B

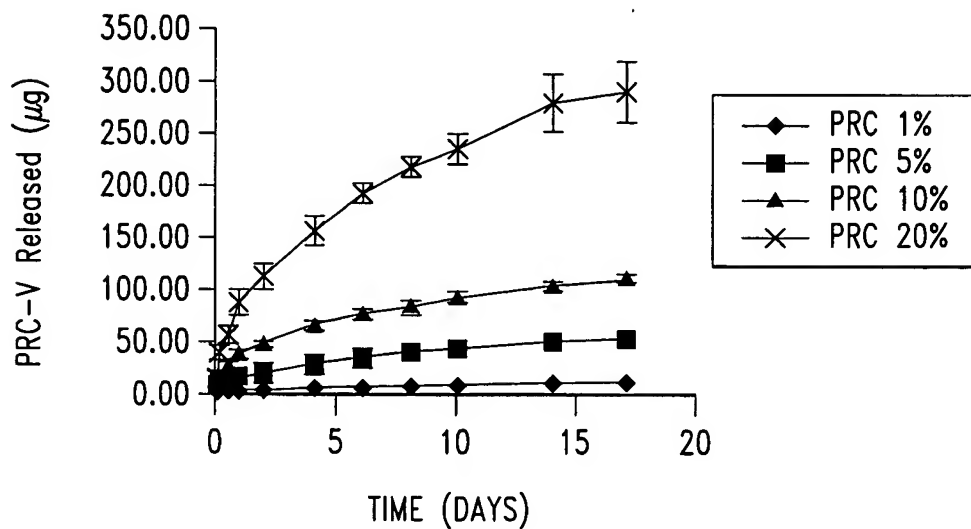


Fig. 75A

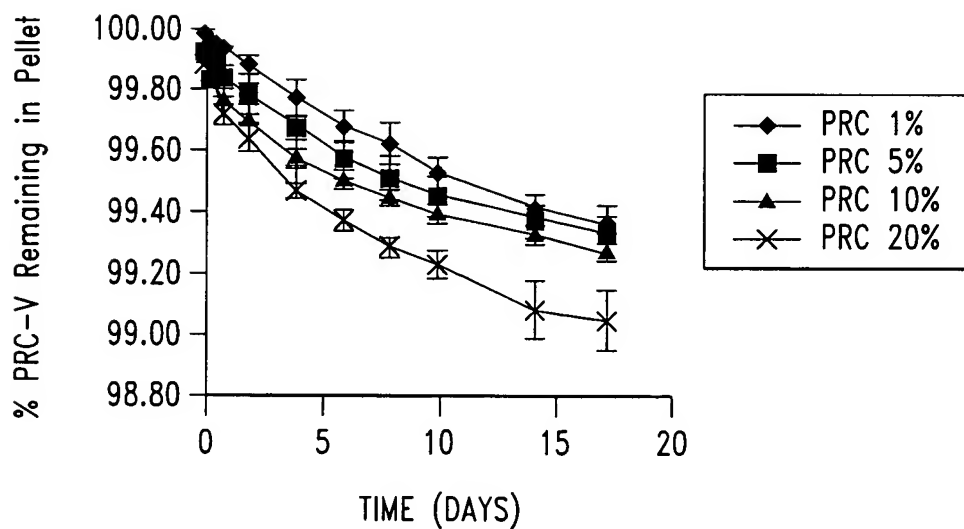


Fig. 75B

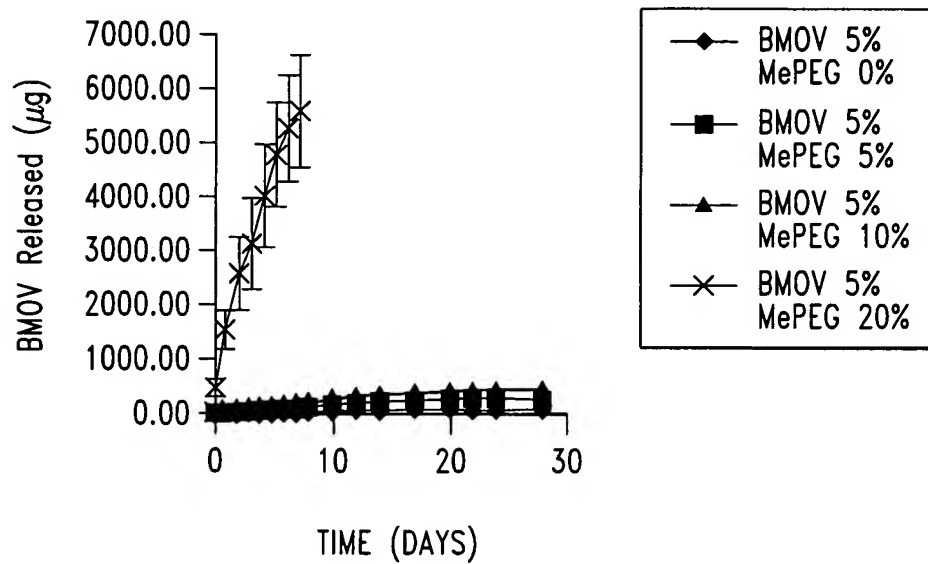


Fig. 76A

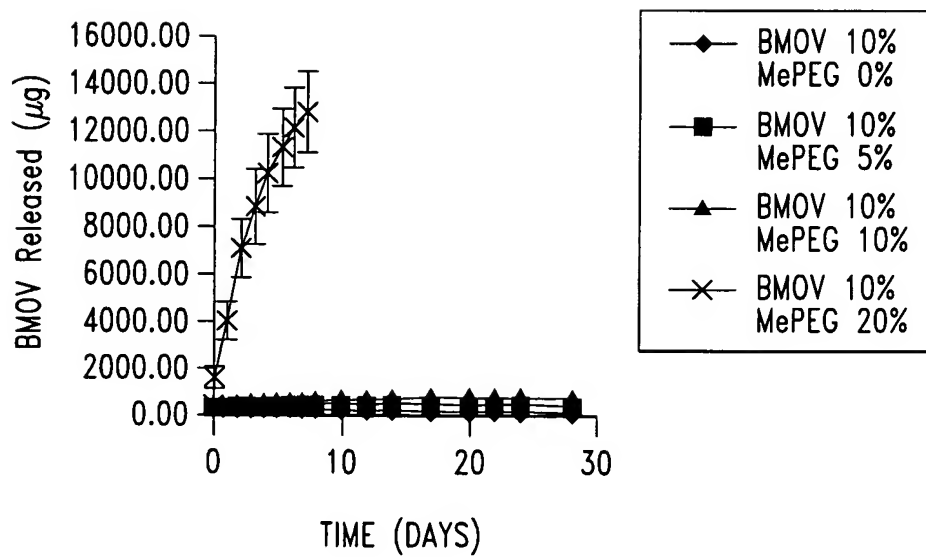


Fig. 76B

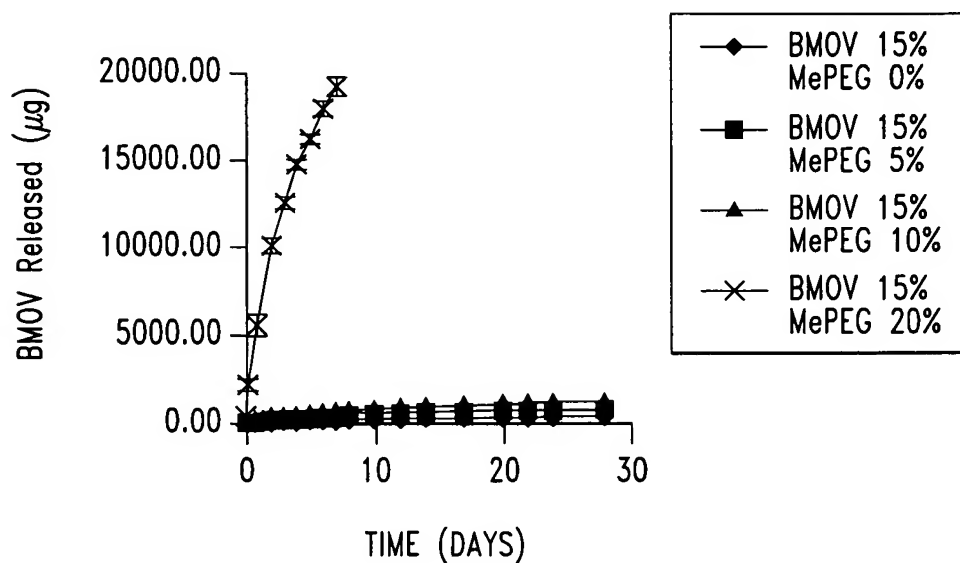


Fig. 76C

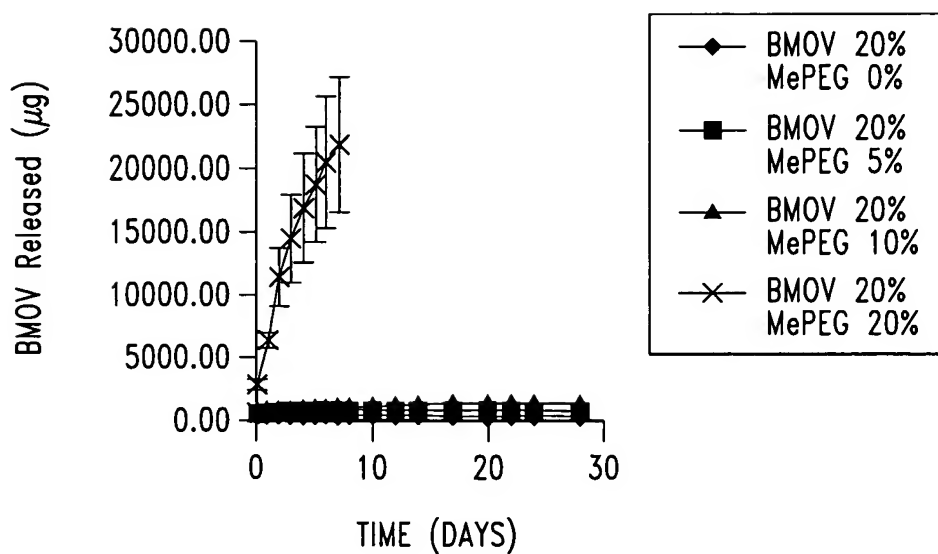


Fig. 76D

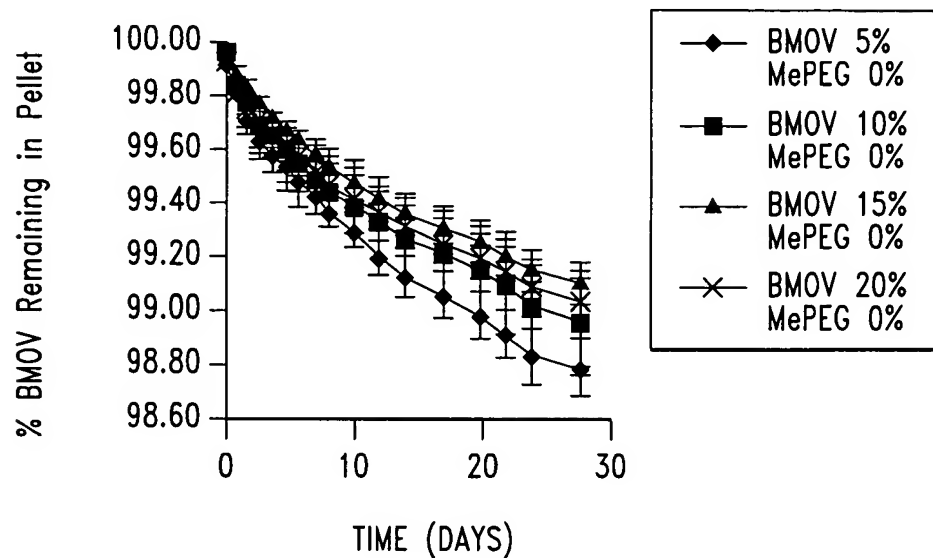


Fig. 77A

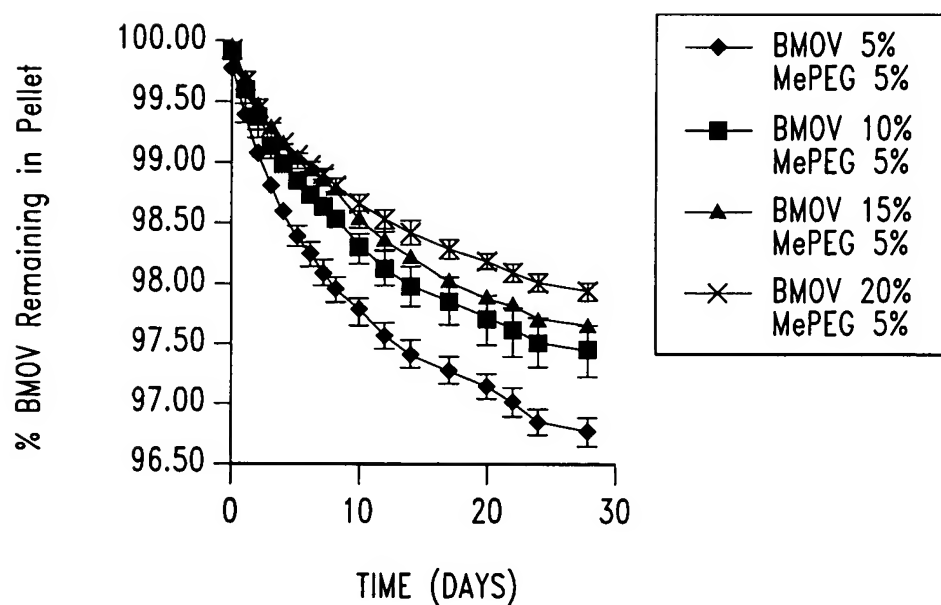


Fig. 77B

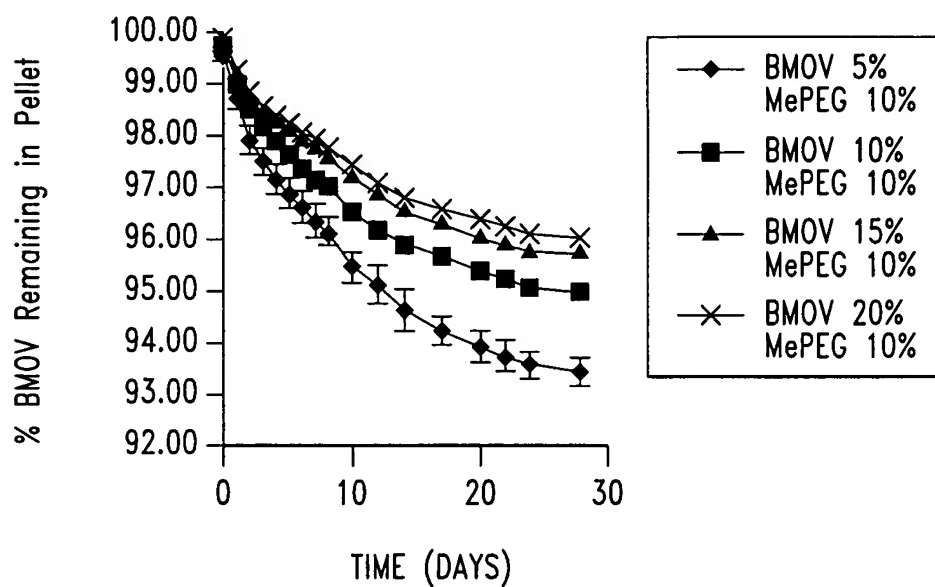


Fig. 77C

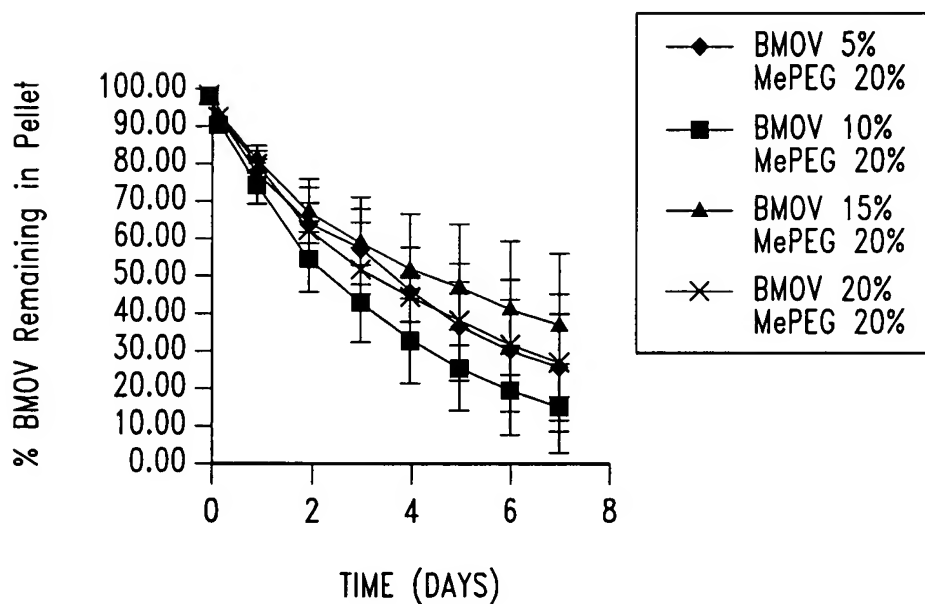


Fig. 77D

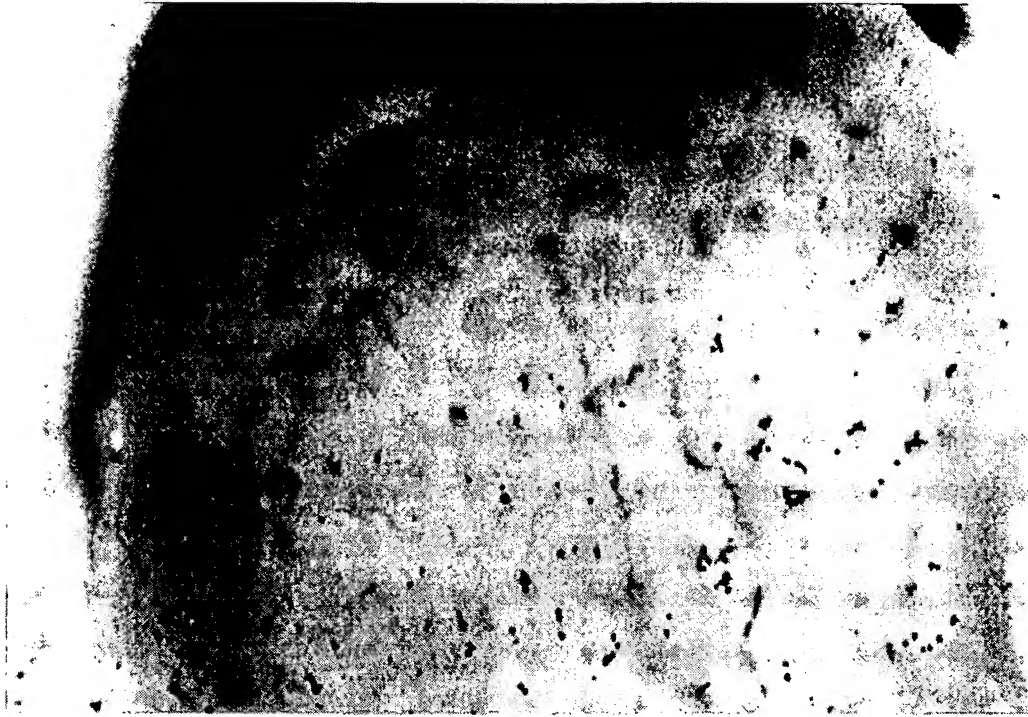


Fig. 78B



Fig. 78A